

MAR 13 REC'D

SEARCH REQUEST FORM

Pat. & T.M. Office

Scientific and Technical Information Center

Requester's Full Name: Sim J. Lee Examiner #: 76060 Date: 03-8-2006
Art Unit: 1752 Phone Number 302-1333 Serial Number: 10/522,036
Mail Box and Bldg/Room Location: 9060 Results Format Preferred: (circle) PAPER DISK E-MAIL
(Rem.)

If more than one search is submitted, please prioritize searches in order of need.

Please provide a detailed statement of the search topic, and describe as specifically as possible the subject matter to be searched. Include the elected species or structures, keywords, synonyms, acronyms, and registry numbers, and combine with the concept or utility of the invention. Define any terms that may have a special meaning. Give examples or relevant citations, authors, etc, if known. Please attach a copy of the cover sheet, pertinent claims, and abstract.

Title of Invention: Pat. Acc. Bib.

Inventors (please provide full names): _____

Earliest Priority Filing Date: _____

For Sequence Searches Only Please include all pertinent information (parent, child, divisional, or issued patent numbers) along with the appropriate serial number.

Please search for a polymer ^{of cl. #1} which
contains either or both of the
repeating unit (a1) of the Formula (I)
and the repeating unit (a2) of the Formula (III)

(method for making such polymer is
explained in cl. #10)

STAFF USE ONLY

	Type of Search	Vendors and cost where applicable
Searcher: <u>wh</u>	NA Sequence (#) _____	STN <u>5566</u>
Searcher Phone #: _____	AA Sequence (#) _____	Dialog _____
Searcher Location: _____	Structure (#) <u>3</u>	Questel/Orbit _____
Date Searcher Picked Up: <u>3/13/06</u>	Bibliographic _____	Dr. Link _____
Date Completed: <u>3/14/06</u>	Litigation _____	Lexis/Nexis _____
Searcher Prep & Review Time: <u>60</u>	Fulltext _____	Sequence Systems _____
Clerical Prep Time: <u>30</u>	Patent Family _____	WWW/Internet _____
Online Time: <u>120</u>	Other _____	Other (specify) _____

MAR 1 2006

Pat. & T.M. Office

Access DB# 182025

SEARCH REQUEST FORM

Scientific and Technical Information Center

Requester's Full Name: Sin J. Lee Examiner #: 76060 Date: 3-8-06
Art Unit: 1752 Phone Number 302-1333 Serial Number: 10/522,036
Mail Box and Bldg/Room Location: 9D66 Results Format Preferred (circle): PAPER ~~DISK~~ ~~E-MAIL~~
(Rem.)

If more than one search is submitted, please prioritize searches in order of need.

Please provide a detailed statement of the search topic, and describe as specifically as possible the subject matter to be searched. Include the elected species or structures, keywords, synonyms, acronyms, and registry numbers, and combine with the concept or utility of the invention. Define any terms that may have a special meaning. Give examples or relevant citations, authors, etc, if known. Please attach a copy of the cover sheet, pertinent claims, and abstract.

Title of Invention: P12. See B7b.

Inventors (please provide full names): _____

Earliest Priority Filing Date: _____

For Sequence Searches Only Please include all pertinent information (parent, child, divisional, or issued patent numbers) along with the appropriate serial number.

of cl. #2.

Please search for a polymer which

contains either or both of the repeating unit

(a'1) of Formula (IV)

and the repeating unit (a'2) of Formula (V)

(method for making such polymer is
explained in cl. # 11)

STAFF USE ONLY

Searcher: 12/h

Searcher Phone #: _____

Searcher Location: _____

Date Searcher Picked Up: 3/13/06Date Completed: 3/14/06Searcher Prep & Review Time: 60Clerical Prep Time: 30Online Time: 120

Type of Search

NA Sequence (#) _____

AA Sequence (#) _____

Structure (#) 3

Bibliographic _____

Litigation _____

Fulltext _____

Patent Family _____

Other _____

Vendors and cost where applicable

STN \$ 566.00

Dialog _____

Questel/Orbit _____

Dr.Link _____

Lexis/Nexis _____

Sequence Systems _____

WWW/Internet _____

Other (specify) _____

=> fil reg

FILE 'REGISTRY' ENTERED AT 15:51:38 ON 13 MAR 2006

=> d his

FILE 'HCAPLUS' ENTERED AT 11:01:28 ON 13 MAR 2006

L1 1 S US20050244740/PN
SEL RN

FILE 'REGISTRY' ENTERED AT 11:02:37 ON 13 MAR 2006

L2 11 S E1-E11

FILE 'LREGISTRY' ENTERED AT 11:28:52 ON 13 MAR 2006

L3 STR
L4 STR

FILE 'REGISTRY' ENTERED AT 11:34:00 ON 13 MAR 2006

L5 SCR 2043
L6 1 S L3 AND L4 AND L5

FILE 'LREGISTRY' ENTERED AT 11:34:54 ON 13 MAR 2006

L7 1 S L3 AND L5
L8 STR L3
L9 1 S L8
L10 0 S L8 AND L4 AND L5
E NOVOLAK/CN
L11 1 S E4
L12 STR
L13 STR
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L15 STR L4
L16 0 S (L8 OR (L12 AND L13)) AND L15 AND L5
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L22 1 S 24979-74-6/RN
L23 1 S 803688-35-9/RN
L24 1 S 803688-38-2/RN
L25 1 S 803688-37-1/RN
L26 2 S L21 OR L22
L27 3 S L23-L25
L28 STR L8
L29 STR L12
L30 50 S L28 OR L29 AND L15 AND L5
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L32 353 S (L28 OR L29) AND L15 AND L5 FUL
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L34 68 S 130668-21-2/CRN
L35 5 S L34 AND L2
L36 STR L15
L37 2 S L34 AND L32
L38 23 S L36
L39 50 S L36 AND L5
L40 STR L36
L41 50 S L40 AND L5

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L42          STR L40
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L45          2 S L44 AND L2
L46          1380 S 108-39-4/CRN
L47          1406 S 106-44-5/CRN
L48          2311 S L46 OR L47
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L50          4 S L34 AND L48
L51          4 S L49 OR L50
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L53          6 S L52 AND L32
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L57          32 S L56 AND L32
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L63          37 S L58 OR L62
L64          2 S L2 AND L63
L65          3 S L2 AND L61
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FILE 'HCAPLUS' ENTERED AT 15:48:59 ON 13 MAR 2006

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L66          29 S L63
L67          8 S L61

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=> d que 167

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L5           SCR 2043
L15          STR

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Ak~Cb~Ak      Ak~O~Ak      Ak~O~Ak~O~Ak      CH2=CH~O
@8  9  10     @11 12 13     @14 15 16 17 18     1  2  3

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G1 4          O~CH=CH2
              5  6  7

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VAR G1=AK/CB/8/11/14

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DEFAULT MLEVEL IS ATOM

DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:

RING(S) ARE ISOLATED OR EMBEDDED

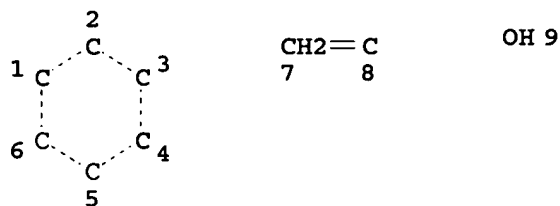
NUMBER OF NODES IS 18

STEREO ATTRIBUTES: NONE

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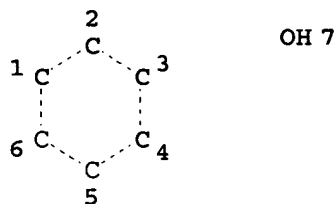
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NODE ATTRIBUTES:
 DEFAULT MLEVEL IS ATOM
 DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:
 RSPEC 1
 NUMBER OF NODES IS 9

STEREO ATTRIBUTES: NONE
 L29 STR



NODE ATTRIBUTES:
 DEFAULT MLEVEL IS ATOM
 DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:
 RSPEC 1
 NUMBER OF NODES IS 7

STEREO ATTRIBUTES: NONE

L32	353	SEA FILE=REGISTRY	SSS FUL (L28 OR L29) AND L15 AND L5
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L46	1380	SEA FILE=REGISTRY	ABB=ON PLU=ON 108-39-4/CRN
L47	1406	SEA FILE=REGISTRY	ABB=ON PLU=ON 106-44-5/CRN
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L50	4	SEA FILE=REGISTRY	ABB=ON PLU=ON L34 AND L48
L51	4	SEA FILE=REGISTRY	ABB=ON PLU=ON L49 OR L50
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L61	10	SEA FILE=REGISTRY	ABB=ON PLU=ON L60 OR L51
L67	8	SEA FILE=HCAPLUS	ABB=ON PLU=ON L61

=> fil hcap
 FILE 'HCAPLUS' ENTERED AT 15:51:53 ON 13 MAR 2006

=> d l67 1-8 ibib abs hitstr hitind

L67 ANSWER 1 OF 8 HCAPLUS COPYRIGHT 2006 ACS on STN
 ACCESSION NUMBER: 2005:237967 HCAPLUS
 DOCUMENT NUMBER: 142:325916
 TITLE: Composition for antireflection film and resist
 pattern formation
 INVENTOR(S): Nakayama, Kazuhiko
 PATENT ASSIGNEE(S): Tokyo Ohka Kogyo Co., Ltd., Japan
 SOURCE: Jpn. Kokai Tokkyo Koho, 28 pp.
 CODEN: JKXXAF
 DOCUMENT TYPE: Patent
 LANGUAGE: Japanese
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2005070154	A2	20050317	JP 2003-209378	2003 0828

PRIORITY APPLN. INFO.: JP 2003-209378
 2003
 0828

AB The composition, for forming the antireflection film under pos.-working photoresist layer, contains (A) a resin, (B) a compound generating an acid by irradiation, (C) a light absorbing agent, and (D) an organic solvent, in which the composition crosslinks by heating and changes from insol. to soluble in alkaline solution by the action of acid generated from B. The resist pattern is manufactured by the steps of (1) coating the composition on a support and heating for antireflection film formation, (2) coating the pos. photoresist on the antireflection film and heating, (3) selectively exposing, (4) post-exposure baking, and (5) developing by an aqueous alkaline solution. Mixing phenomena of the antireflection film and photoresist layer are prevented and the antireflection film can be removed without dry etching process.

IT 803688-36-0P, Cyclohexanedimethanol divinyl ether-formaldehyde-m-cresol copolymer
 (antireflection film for pos. photoresist pattern formation)

RN 803688-36-0 HCAPLUS

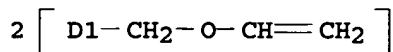
CN Formaldehyde, polymer with bis[(ethenyloxy)methyl]cyclohexane and 3-methylphenol (9CI) (CA INDEX NAME)

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CRN 130668-21-2

CMF C12 H20 O2

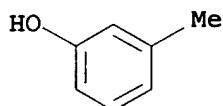
CCI IDS



CM 2

CRN 108-39-4

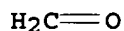
CMF C7 H8 O



CM 3

CRN 50-00-0

CMF C H2 O



IC ICM G03F007-11

ICS H01L021-027

CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)

IT 803688-36-0P, Cyclohexanedimethanol divinyl
 ether-formaldehyde-m-cresol copolymer 803688-39-3P,
 Cyclohexanedimethanol divinyl ether-hydroxystyrene copolymer
 (antireflection film for pos. photoresist pattern formation)

L67 ANSWER 2 OF 8 HCAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 2005:235470 HCAPLUS

DOCUMENT NUMBER: 142:325909

TITLE: Lift-off resist material and formation of
 resist pattern with controlled width of under
 layer

INVENTOR(S): Nakayama, Kazuhiko; Harada, Hisanori; Takagi,
 Isamu

PATENT ASSIGNEE(S): Tokyo Ohka Kogyo Co., Ltd., Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 28 pp.

CODEN: JKXXAF

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2005070153	A2	20050317	JP 2003-209377	2003 0828

PRIORITY APPLN. INFO.:

JP 2003-209377

2003
0828

AB The lift-off resist material, comprising (A) a resin, (B) a compound generating an acid by irradiation, and (C) an organic solvent, crosslinks by heating and changes from insol. to soluble in alkaline solution by the action of acid generated from B. The lift-off resist pattern is manufactured by the steps of (1) forming an under resist layer by coating the lift-off resist material on a support and heating, (2) coating an upper resist layer comprising (non) chemical amplification-type pos. resist composition and heating, (3) selectively exposing, (4) post exposure baking, and (5) developing with an aqueous alkaline solution for forming resist pattern with cross section narrow at the interface between the support and the resist layer. The width of the under resist layer is controlled easily.

IT 803688-35-9P, Cyclohexanedimethanol divinyl ether-m-cresol-p-cresol-formaldehyde-salicylaldehyde copolymer (lift-off resist material with under layer containing alkali-soluble resin and acid generator)

RN 803688-35-9 HCAPLUS

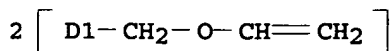
CN Benzaldehyde, 2-hydroxy-, polymer with bis[(ethenyloxy)methyl]cyclohexane, formaldehyde, 3-methylphenol and 4-methylphenol (9CI) (CA INDEX NAME)

CM 1

CRN 130668-21-2

CMF C12 H20 O2

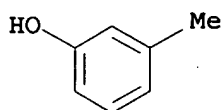
CCI IDS



CM 2

CRN 108-39-4

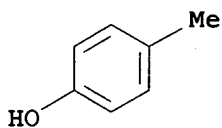
CMF C7 H8 O



CM 3

CRN 106-44-5

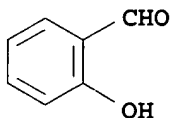
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CM 4

CRN 90-02-8

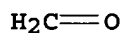
CMF C7 H6 O2



CM 5

CRN 50-00-0

CMF C H2 O



IC ICM G03F007-26
 ICS C08F008-00; C08G008-30; G03F007-039; G03F007-38; H01L021-027
 CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and
 Other Reprographic Processes)
 Section cross-reference(s): 38
 IT 803688-35-9P, Cyclohexanedimethanol divinyl
 ether-m-cresol-p-cresol-formaldehyde-salicylaldehyde copolymer
 803688-38-2P, Cyclohexanedimethanol divinyl ether-hydroxystyrene-
 styrene copolymer
 (lift-off resist material with under layer containing alkali-soluble
 resin and acid generator)

L67 ANSWER 3 OF 8 HCAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 2005:33917 HCAPLUS

DOCUMENT NUMBER: 142:144067

TITLE: Positive photoresist compositions and method

for forming resist patterns for system LCD
with excellent lineality, resolution, and heat
resistance

INVENTOR(S): Kurihara, Masaki; Hidesaka, Shinichi;
Shinkura, Satoshi

PATENT ASSIGNEE(S): Tokyo Ohka Kogyo Co., Ltd., Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 39 pp.
CODEN: JKXXAF

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2005010215	A2	20050113	JP 2003-171029	2003 0616
PRIORITY APPLN. INFO.:			JP 2003-171029	2003 0616

OTHER SOURCE(S): MARPAT 142:144067

AB The comps. contain alkali-soluble polymers or alkali-insol. polymers which become alkali-soluble by acids, wherein the polymers are purified using ion-exchange resins before composition preparation. The method contains applying the comps. on substrates, prebaking them, selectively exposing the resist films via masks with patterns of $\leq 2.0 \mu\text{m}$ and those of $> 2.0 \mu\text{m}$, post-exposure baking them, and developing them in alkaline solns., thus giving resist patterns for IC and those for LCD units simultaneously.

IT 823790-46-1P, Cyclohexanedimethanol divinyl ether-m-cresol-p-cresol-formaldehyde copolymer (novolak; pos. photoresists containing purified alkali-soluble polymers and quinonediazide esters for system LCD manufacture).

RN 823790-46-1 HCAPLUS

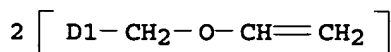
CN Formaldehyde, polymer with bis[(ethenyloxy)methyl]cyclohexane, 3-methylphenol and 4-methylphenol (9CI) (CA INDEX NAME)

CM 1

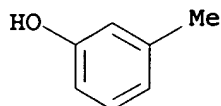
CRN 130668-21-2

CMF C12 H20 O2

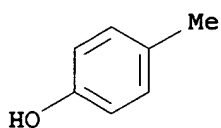
CCI IDS



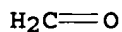
CM 2

CRN 108-39-4
CMF C7 H8 O

CM 3

CRN 106-44-5
CMF C7 H8 O

CM 4

CRN 50-00-0
CMF C H2 O

IC ICM G03F007-022
ICS G03F007-039; G03F007-26; H01L021-027
CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)
Section cross-reference(s): 38
IT 823790-46-1P, Cyclohexanedimethanol divinyl ether-m-cresol-p-cresol-formaldehyde copolymer
(novolak; pos. photoresists containing purified alkali-soluble polymers and quinonediazide esters for system LCD manufacture)

L67 ANSWER 4 OF 8 HCAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 2005:33915 HCAPLUS

DOCUMENT NUMBER: 142:103184

TITLE: Chemically amplified positive photoresist compositions and method for forming resist patterns for system LCD with excellent heat resistance and sensitivity

INVENTOR(S): Nakagawa, Yusuke; Hidesaka, Shinichi; Miyagi, Masaru; Harada, Hisanobu

PATENT ASSIGNEE(S): Tokyo Ohka Kogyo Co., Ltd., Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 22 pp.

CODEN: JKXXAF

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2005010213	A2	20050113	JP 2003-171027	2003 0616
PRIORITY APPLN. INFO.:			JP 2003-171027	2003 0616

OTHER SOURCE(S): MARPAT 142:103184

AB The comps. with acid content ≤ 50 ppm contain alkali-soluble polymers, compds. $H_2C:CHOR_1OCH:CH_2$ [$R_1 =$ (un)substituted C1-10 alkylene, R_4mQR_4m ; $R_4 =$ (un)substituted C1-10 alkylene; $m = 0, 1$], photoacid generators, and organic solvents. The method contains applying the comps. on substrates, prebaking them, selectively exposing the resist films via masks with patterns of ≤ 2.0 μm and those of > 2.0 μm , post-exposure baking them, and developing them in alkaline solns., thus giving resist patterns for IC and those for LCD units simultaneously.

IT 808750-79-0P
(chemical amplified pos. photoresists for forming IC and LCD patterns on substrates simultaneously with good heat resistance and sensitivity)

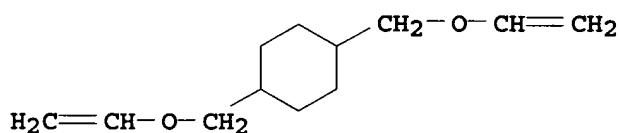
RN 808750-79-0 HCAPLUS

CN Benzaldehyde, 2-hydroxy-, polymer with 1,4-bis[(ethenyloxy)methyl]cyclohexane, formaldehyde, 3-methylphenol and 4-methylphenol (9CI) (CA INDEX NAME)

CM 1

CRN 17351-75-6

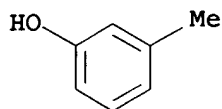
CMF C12 H20 O2



CM 2

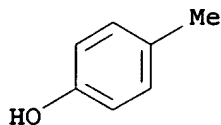
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CMF C7 H8 O



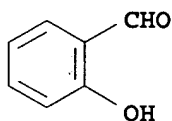
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CRN 106-44-5
CMF C7 H8 O



CM 4

CRN 90-02-8
CMF C7 H6 O2



CM 5

CRN 50-00-0
CMF C H2 O

H₂C=O

IC ICM G03F007-039
ICS G03F007-004; G03F007-027; H01L021-027
CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)
IT 808750-79-0P 819800-41-4P
(chemical amplified pos. photoresists for forming IC and LCD patterns on substrates simultaneously with good heat resistance and sensitivity)

L67 ANSWER 5 OF 8 HCAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 2004:1076933 HCAPLUS

DOCUMENT NUMBER: 142:65298

TITLE: Chemically amplified positive photoresists for system LCD and their patterning

INVENTOR(S): Hidesaka, Shinichi; Kurihara, Masaki; Nakagawa, Yusuke; Tate, Toshiaki

PATENT ASSIGNEE(S): Tokyo Ohka Kogyo Co., Ltd., Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 20 pp.

CODEN: JKXXAF

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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JP 2004354609

A2

20041226

JP 2003-151083

2003
0528

PRIORITY APPLN. INFO.:

JP 2003-151083

2003
0528

AB The photoresists comprise (A) alkali-insol. novolaks prepared from alkali-soluble novolaks and $R_1(OCH:CH_2)_2$ [R_1 = C1-10 alkylene, R_4mQR_4m (R_4 = C1-10 alkylene; m = 0, 1; Q = cyclohexylene)] and increasing solubility in aqueous alkali solns. by acid action, (C) radiation-sensitive acid generators, and (D) organic solvents. The photoresists are applied on substrates, prebaked, exposed through masks containing $\leq 2.0\text{-}\mu\text{m}$ and $> 2.0\text{-}\mu\text{m}$ -resolution patterns, baked, and developed to form IC patterns and patterns for LCD, simultaneously.

IT 808750-78-9P, 1,4-Bis(vinyloxymethyl)cyclohexane-m-cresol-formaldehyde copolymer 808750-79-0P
(chemical amplified pos. photoresists containing vinyloxymethyl ether-bridged novolaks for system LCD)

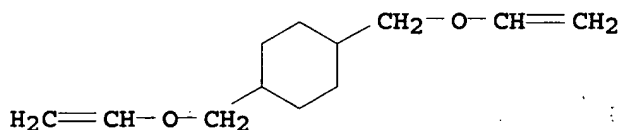
RN 808750-78-9 HCAPLUS

CN Formaldehyde, polymer with 1,4-bis[(ethenyloxy)methyl]cyclohexane and 3-methylphenol (9CI) (CA INDEX NAME)

CM 1

CRN 17351-75-6

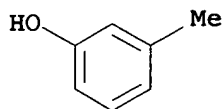
CMF C12 H20 O2



CM 2

CRN 108-39-4

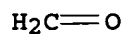
CMF C7 H8 O



CM 3

CRN 50-00-0

CMF C H2 O



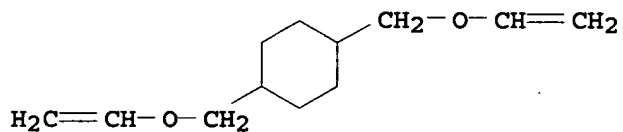
RN 808750-79-0 HCAPLUS

CN Benzaldehyde, 2-hydroxy-, polymer with 1,4-bis[(ethenyloxy)methyl]cyclohexane, formaldehyde, 3-methylphenol and 4-methylphenol (9CI) (CA INDEX NAME)

CM 1

CRN 17351-75-6

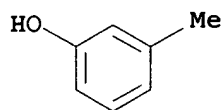
CMF C12 H20 O2



CM 2

CRN 108-39-4

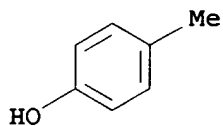
CMF C7 H8 O



CM 3

CRN 106-44-5

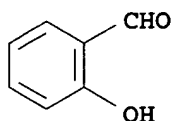
CMF C7 H8 O



CM 4

CRN 90-02-8

CMF C7 H6 O2



CM 5

CRN 50-00-0

CMF C H2 O

 $H_2C=O$

IC ICM G03F007-039

ICS C08G008-30; G03F007-004; H01L021-027

CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)

Section cross-reference(s): 76

IT 808750-78-9P, 1,4-Bis(vinyloxymethyl)cyclohexane-m-cresol-formaldehyde copolymer 808750-79-0P
(chemical amplified pos. photoresists containing vinyloxymethyl ether-bridged novolaks for system LCD)

L67 ANSWER 6 OF 8 HCAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 2004:1037374 HCAPLUS

DOCUMENT NUMBER: 142:45895

TITLE: Chemically amplified positive photo resist composition and method for forming resist pattern

INVENTOR(S): Maruyama, Kenji; Kurihara, Masaki; Miyagi, Ken; Niikura, Satoshi; Shimatani, Satoshi; Masujima, Masahiro; Nitta, Kazuyuki; Yamaguchi, Toshihiro; Doi, Kosuke

PATENT ASSIGNEE(S): Tokyo Ohka Kogyo Co., Ltd., Japan

SOURCE: PCT Int. Appl., 79 pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 2

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2004104702	A1	20041202	WO 2004-JP7139	2004 0519

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW

RW: BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH,

CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU,
 MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI,
 CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG
 US 2005244740 A1 20051103 US 2005-522036

2005
 0119

PRIORITY APPLN. INFO.:

JP 2003-141805

A

2003
 0520

JP 2003-426503

A

2003
 1224

WO 2004-JP7139

W

2004
 0519

AB The disclosed chemical amplified pos. photoresist composition which comprises an organic solvent and, dissolved therein, a resin being prepared through the reaction of a novolac resin or a hydroxystyrene resin with a crosslinking agent, being slightly soluble or insol. in an alkaline aqueous solution and exhibiting enhanced solubility into an aqueous alkali

solution in the presence of an acid, and (B) a compound generating an acid by the irradiation with a radiation, wherein it contains an acid component in a amount of 10 ppm or less. The chemical amplified pos. photoresist composition can form a resist exhibiting good storage stability as a resist solution in a bottle.

IT 803688-35-9P, m-Cresol-p-cresol-formaldehyde-salicylaldehyde-cyclohexanedimethanol divinyl ether copolymer
 803688-36-0P, m-Cresol-formaldehyde-cyclohexanedimethanol divinyl ether copolymer 803688-37-1P, m-Cresol-formaldehyde-salicylaldehyde-cyclohexanedimethanol divinyl ether copolymer
 (pos. photoresist composition containing acid generator and)

RN 803688-35-9 HCAPLUS

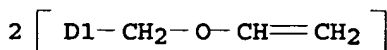
CN Benzaldehyde, 2-hydroxy-, polymer with bis[(ethenyloxy)methyl]cyclohexane, formaldehyde, 3-methylphenol and 4-methylphenol (9CI) (CA INDEX NAME)

CM 1

CRN 130668-21-2

CMF C12 H20 O2

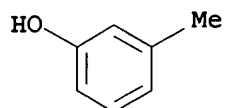
CCI IDS



CM 2

CRN 108-39-4

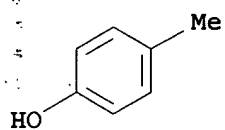
CMF C7 H8 O



CM 3

CRN 106-44-5

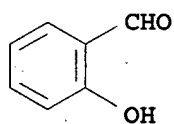
CMF C7 H8 O



CM 4

CRN 90-02-8

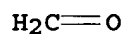
CMF C7 H6 O2



CM 5

CRN 50-00-0

CMF C H2 O



RN 803688-36-0 HCAPLUS

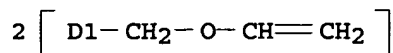
CN Formaldehyde, polymer with bis[(ethenyloxy)methyl]cyclohexane and 3-methylphenol (9CI) (CA INDEX NAME)

CM 1

CRN 130668-21-2

CMF C12 H20 O2

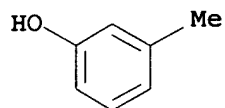
CCI IDS



CM 2

CRN 108-39-4

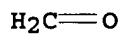
CMF C7 H8 O



CM 3

CRN 50-00-0

CMF C H2 O



RN 803688-37-1 HCAPLUS

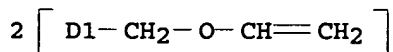
CN Benzaldehyde, 2-hydroxy-, polymer with
bis[(ethenyloxy)methyl]cyclohexane, formaldehyde and
3-methylphenol (9CI) (CA INDEX NAME)

CM 1

CRN 130668-21-2

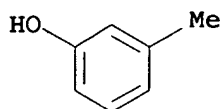
CMF C12 H20 O2

CCI IDS



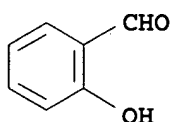
CM 2

CRN 108-39-4
CMF C7 H8 O



CM 3

CRN 90-02-8
CMF C7 H6 O2



CM 4

CRN 50-00-0
CMF C H2 O



IC ICM G03F007-039
CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)
IT 24979-70-2P, p-Hydroxystyrene polymer 24979-74-6P, p-Hydroxystyrene-styrene copolymer 803688-35-9P, m-Cresol-p-cresol-formaldehyde-salicylaldehyde-cyclohexanedimethanol divinyl ether copolymer 803688-36-0P, m-Cresol-formaldehyde-cyclohexanedimethanol divinyl ether copolymer 803688-37-1P, m-Cresol-formaldehyde-salicylaldehyde-cyclohexanedimethanol divinyl ether copolymer 803688-38-2P, Hydroxystyrene-styrene-cyclohexanedimethanol divinyl ether copolymer 803688-39-3P (pos. photoresist composition containing acid generator and)
REFERENCE COUNT: 17 THERE ARE 17 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L67 ANSWER 7 OF 8 HCAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 2000:475718 HCAPLUS
DOCUMENT NUMBER: 133:105731
TITLE: Thermosetting composition containing polyhemiacetal ester resin and powdery thermosetting composition
INVENTOR(S): Ishidoya, Masahiro; Takemoto, Masayuki; Sato, Atsushi; Sato, Koji; Saito, Shun
PATENT ASSIGNEE(S): NOF Corporation, Japan
SOURCE: PCT Int. Appl., 36 pp.

DOCUMENT TYPE: CODEN: PIXXD2
 LANGUAGE: Patent
 FAMILY ACC. NUM. COUNT: Japanese
 1
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2000040641	A1	20000713	WO 1999-JP6964	1999 1210
W: CA, JP, KR, US RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				
CA 2322517	AA	20000713	CA 1999-2322517	1999 1210
EP 1059323	A1	20001213	EP 1999-959769	1999 1210
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI				
TW 581796	B	20040401	TW 1999-88122900	1999 1224
US 6403670	B1	20020611	US 2000-623127	2000 1013
PRIORITY APPLN. INFO.:			JP 1998-376957	A 1998 1228
			WO 1999-JP6964	W 1999 1210

AB A thermosetting composition comprises (A) a polyhemiacetal ester resin OCOR1CO2CHMeYR2YCHMe (wherein R1 and R2 each is a divalent organic group and Y is oxygen or sulfur) and (B) a compound (e.g., epoxy resins) having per mol. two or more reactive functional groups capable of forming a chemical bond with a carboxyl group and optionally further contains (C) an acid catalyst. It gives at a relatively low temperature a cured article excellent in chemical performance, phys. performance, adhesion, smoothness, weatherability, etc., and has satisfactory storage stability. It is utilizable as the solvent-diluted type, solvent-free liquid type having an effective-ingredient content of 100 %, or powder type.

IT 283167-78-2P

(thermosetting composition containing polyhemiacetal ester resin and powdery thermosetting composition)

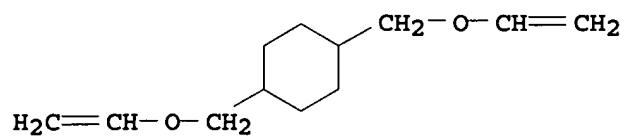
RN 283167-78-2 HCAPLUS

CN 1,4-Cyclohexanedicarboxylic acid, polymer with
 1,4-bis[(ethenyloxy)methyl]cyclohexane, (chloromethyl)oxirane,
 formaldehyde, 4,4'-(1-methylethylidene)bis[phenol] and
 1,3,5-triazine-2,4,6-triamine (9CI) (CA INDEX NAME)

CM 1

CRN 17351-75-6

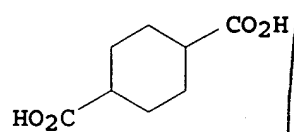
CMF C12 H20 O2



CM 2

CRN 1076-97-7

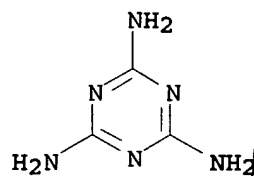
CMF C8 H12 O4



CM 3

CRN 108-78-1

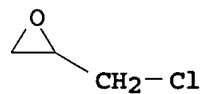
CMF C3 H6 N6



CM 4

CRN 106-89-8

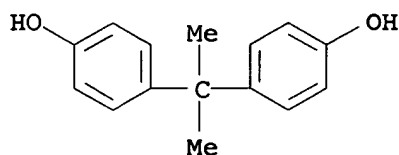
CMF C3 H5 Cl O



CM 5

CRN 80-05-7

CMF C15 H16 O2



CM 6

CRN 50-00-0

CMF C H2 O

H₂C=O

IC ICM C08G085-00

ICS C08G018-28; C08G059-42; C08G012-40; C08G077-445

CC 37-3 (Plastics Manufacture and Processing)

IT 283167-74-8P 283167-75-9P 283167-76-0P 283167-77-1P

283167-78-2P 283167-79-3P 283167-80-6P 283174-90-3P

(thermosetting composition containing polyhemiacetal ester resin and powdery thermosetting composition)

REFERENCE COUNT: 5 THERE ARE 5 CITED REFERENCES AVAILABLE
FOR THIS RECORD. ALL CITATIONS AVAILABLE
IN THE RE FORMAT

L67 ANSWER 8 OF 8 HCAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 1998:795532 HCAPLUS

DOCUMENT NUMBER: 130:96603

TITLE: UV-curable resin compositions for electronic
packaging materials and adhesives with
excellent heat and moisture resistance

INVENTOR(S): Komori, Shinji; Miyake, Sumiya

PATENT ASSIGNEE(S): Sumitomo Bakelite Co., Ltd., Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 3 pp.

CODEN: JKXXAF

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	D
JP 10330463	A2	19981215	JP 1997-141823	
JP 3265466	B2	20020311		
PRIORITY APPLN. INFO.:				
			JP 1997-141823	

1997
0530
1997
0530

AB The comps. comprise (A) phenols or phenolic resins having electron-donating groups, (B) compds. having ≥ 2 C:C unsatd. bonds, and (C) cationic hardening initiators. Thus, a composition of PR 51767 60, 1,4-divinylbenzene 130, and SP 170 3 parts was cured with UV light to give a specimen showing Tg 163° and

excellent moisture resistance.

IT 219313-92-5P, Cresol-2-cresol-1,4-cyclohexanedimethanol
divinyl ether-formaldehyde copolymer 219313-94-7P,
Bisphenol A-2-cresol-1,4-cyclohexanedimethanol divinyl
ether-formaldehyde copolymer
(UV-curable resin compns. for electronic packaging materials
and adhesives with excellent heat and moisture resistance)

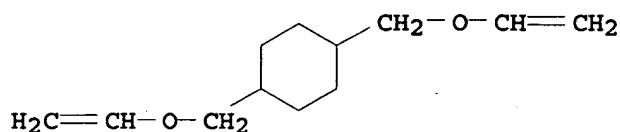
RN 219313-92-5 HCAPLUS

CN Formaldehyde, polymer with 1,4-bis[(ethenyloxy)methyl]cyclohexane,
methylphenol and 2-methylphenol (9CI) (CA INDEX NAME)

CM 1

CRN 17351-75-6

CMF C12 H20 O2



CM 2

CRN 1319-77-3

CMF C7 H8 O

CCI IDS



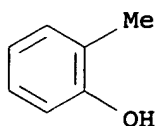
D1-OH

D1-Me

CM 3

CRN 95-48-7

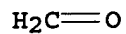
CMF C7 H8 O



CM 4

CRN 50-00-0

CMF C H2 O



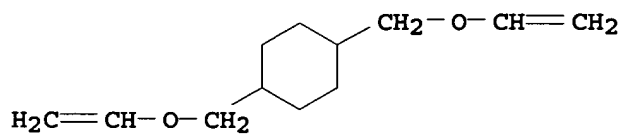
RN 219313-94-7 HCAPLUS

CN Formaldehyde, polymer with 1,4-bis[(ethenyloxy)methyl]cyclohexane,
4,4'-(1-methylethylidene)bis[phenol] and 2-methylphenol (9CI) (CA
INDEX NAME)

CM 1

CRN 17351-75-6

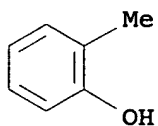
CMF C12 H20 O2



CM 2

CRN 95-48-7

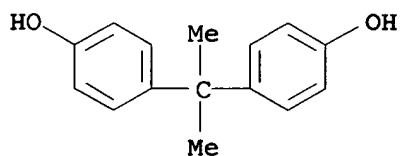
CMF C7 H8 O



CM 3

CRN 80-05-7

CMF C15 H16 O2



CM 4

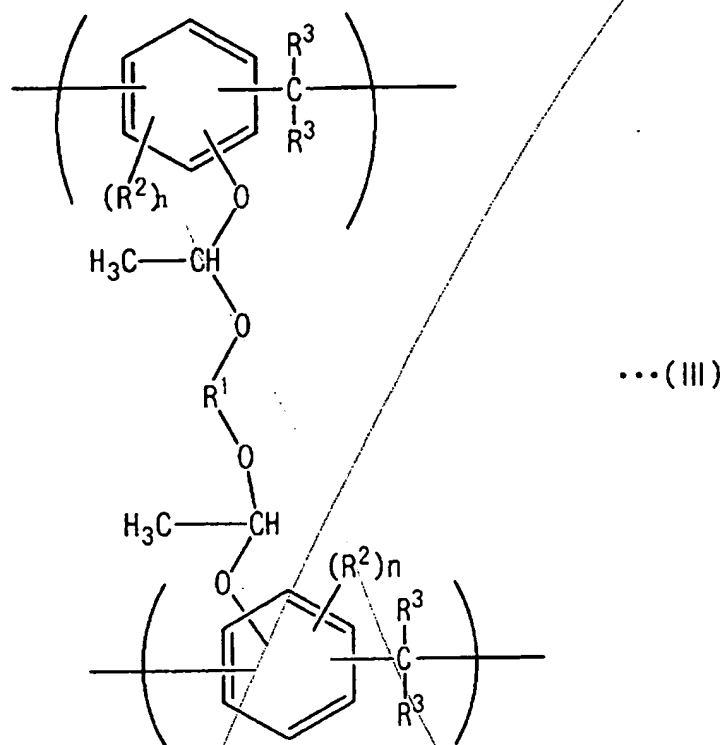
CRN 50-00-0

CMF C H2 O

H₂C=O

IC ICM C08G061-02
CC 38-3 (Plastics Fabrication and Uses)
Section cross-reference(s): 76
IT 219313-91-4P, Cresol-1,4-divinylbenzene-formaldehyde copolymer
219313-92-5P, Cresol-2-cresol-1,4-cyclohexanedimethanol
divinyl ether-formaldehyde copolymer 219313-93-6P,
3-Allyl-1,6-heptadiene-cresol-formaldehyde copolymer
219313-94-7P, Bisphenol A-2-cresol-1,4-
cyclohexanedimethanol divinyl ether-formaldehyde copolymer
219313-95-8P, 2-Cresol-1,4-cyclohexanedimethanol divinyl ether
copolymer 219313-96-9P, 1,4-Cyclohexanedimethanol divinyl
ether-2-nitrophenol copolymer
(UV-curable resin comps. for electronic packaging materials
and adhesives with excellent heat and moisture resistance)

Appl. No. : 10/522,036
 Filed : January 19, 2005



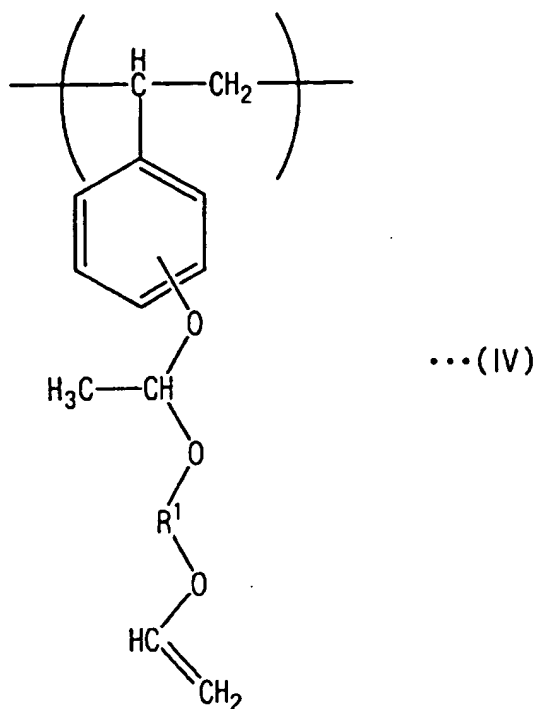
wherein R^1 represents either an alkylene group having 1 to 10 carbon atoms which may have a substituent or a group represented by the above general formula (II) (wherein R^4 represents an alkylene group having 1 to 10 carbon atoms which may have a substituent and m represents 0 or 1), the alkylene group may have an oxygen bond (ether bond) in the main chain, R^2 and R^3 each independently represents hydrogen atom or alkyl group having 1 to 3 carbon atoms, and n represents an integer of 1 to 3; and
 (B) a compound generating an acid under irradiation with radiation, in an organic solvent, wherein the content of an acid component is 10 ppm or less.

2. (Original) A chemical amplification type positive photoresist composition prepared by dissolving:

(A') an slightly alkali-soluble or alkali-insoluble polyhydroxystyrenic resin having a property that solubility in an aqueous alkali solution is enhanced in the presence of an acid, comprising either

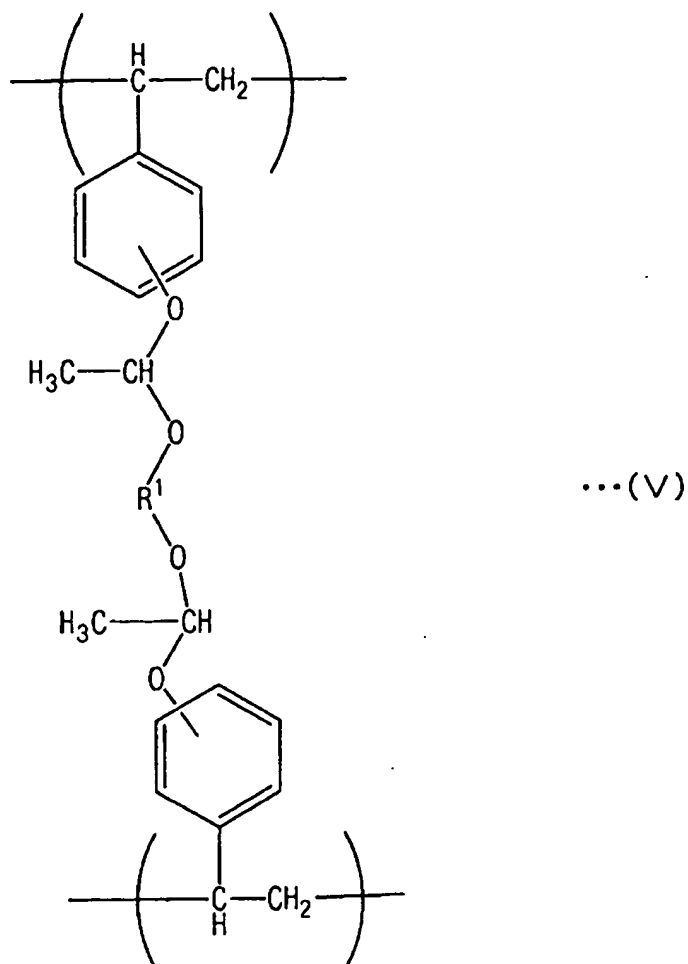
Appl. No. : 10/522,036
 Filed : January 19, 2005

or both of a constituent unit (a'1) represented by the following general formula



(IV):

wherein R¹ represents either an alkylene group having 1 to 10 carbon atoms which may have a substituent or a group represented by the above general formula (II) (wherein R⁴ represents an alkylene group having 1 to 10 carbon atoms which may have a substituent and m represents 0 or 1), the alkylene group may have a oxygen bond (ether bond) in the main chain, and an intermolecular crosslinked moiety (a'2) represented by the following general formula (V):



wherein R^1 represents either an alkylene group having 1 to 10 carbon atoms which may have a substituent or a group represented by the above general formula (II) (wherein R^4 represents an alkylene group having 1 to 10 carbon atoms which may have a substituent and m represents 0 or 1), the alkylene group may have an oxygen bond (ether bond) in the main chain; and
 (B) a compound generating an acid under irradiation with radiation, in an organic solvent, wherein the content of an acid component is 10 ppm or less.

3. (Original) A chemical amplification type photoresist composition prepared by dissolving:

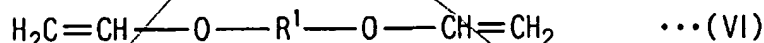
(A'') a slightly alkali-soluble or alkali-insoluble polyhydroxystyrenic resin having such a property that solubility in an aqueous alkali solution is enhanced in the presence of an acid, comprising

7. (Original) The chemical amplification type positive photoresist composition according to any one of claims 1 to 3, which comprises γ -butyrolactone.

8. (Original) The chemical amplification type positive photoresist composition according to any one of claims 1 to 3, which is used for a thick-film photolithography process used for forming a resist film having a thickness of about 2 to 7 μm .

9. (Original) The chemical amplification type positive photoresist composition according to claim 8, wherein the thick-film photolithography process is used for forming a resist pattern for implantation.

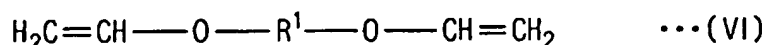
10. (Original) A method for synthesis of the component (A) of claim 1, which comprises reacting a novolak resin with a crosslinking agent represented by the following general formula



(VI):

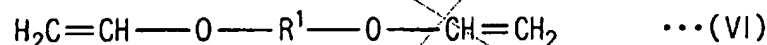
wherein R^1 represents either an alkylene group having 1 to 10 carbon atoms which may have a substituent or a group represented by the above general formula (II) (wherein R^4 represents an alkylene group having 1 to 10 carbon atoms which may have a substituent and m represents 0 or 1, and the alkylene group may have an oxygen bond (ether bond) in the main chain, in the substantial absence of an acid catalyst.

11. (Original) A method for synthesis of the component (A') of claim 2, which comprises reacting a hydroxystyrenic resin with a crosslinking agent represented by the following general formula (VI):



wherein R^1 represents either an alkylene group having 1 to 10 carbon atoms which may have a substituent or a group represented by the above general formula (II) (wherein R^4 represents an alkylene group having 1 to 10 carbon atoms which may have a substituent and m represents 0 or 1, and the alkylene group may have an oxygen bond (ether bond) in the main chain, in the presence of an acid catalyst.

12. (Original) A method for synthesis of the component (A'') of claim 3, which comprises reacting a hydroxystyrenic resin with a crosslinking agent represented by the following general formula (VI):



wherein R^1 represents either an alkylene group having 1 to 10 carbon atoms which may have a substituent or a group represented by the above general formula (II) (wherein R^4 represents an alkylene group having 1 to 10 carbon atoms which may have a substituent and m represents 0 or 1, and the alkylene group may have an oxygen bond (ether bond) in the main chain, in the presence of an acid catalyst.

=> fil reg

FILE 'REGISTRY' ENTERED AT 15:49:35 ON 13 MAR 2006

=> d his

FILE 'HCAPLUS' ENTERED AT 11:01:28 ON 13 MAR 2006

L1 1 S US20050244740/PN
SEL RN

FILE 'REGISTRY' ENTERED AT 11:02:37 ON 13 MAR 2006

L2 11 S E1-E11

FILE 'LREGISTRY' ENTERED AT 11:28:52 ON 13 MAR 2006

L3 STR
L4 STR

FILE 'REGISTRY' ENTERED AT 11:34:00 ON 13 MAR 2006

L5 SCR 2043
L6 1 S L3 AND L4 AND L5

FILE 'LREGISTRY' ENTERED AT 11:34:54 ON 13 MAR 2006

L7 1 S L3 AND L5
L8 STR L3
L9 1 S L8
L10 0 S L8 AND L4 AND L5
E NOVOLAK/CN
L11 1 S E4
L12 STR
L13 STR
L14 0 S (L8 OR (L12 AND L13)) AND L4 AND L5
L15 STR L4
L16 0 S (L8 OR (L12 AND L13)) AND L15 AND L5
L17 0 S (L8 OR (L12 AND L13)) AND L15 AND L5 FUL

FILE 'REGISTRY' ENTERED AT 12:17:16 ON 13 MAR 2006

L18 0 S (L8 OR (L12 AND L13)) AND L15 AND L5
L19 41 S (L8 OR (L12 AND L13)) AND L15 AND L5 FUL
L20 0 S L19 AND L2
L21 1 S 24979-70-2/RN
L22 1 S 24979-74-6/RN
L23 1 S 803688-35-9/RN
L24 1 S 803688-38-2/RN
L25 1 S 803688-37-1/RN
L26 2 S L21 OR L22
L27 3 S L23-L25
L28 STR L8
L29 STR L12
L30 50 S L28 OR L29 AND L15 AND L5
L31 13 S (L28 OR L29) AND L15 AND L5
L32 353 S (L28 OR L29) AND L15 AND L5 FUL
L33 0 S L32 AND L2
L34 68 S 130668-21-2/CRN
L35 5 S L34 AND L2
L36 STR L15
L37 2 S L34 AND L32
L38 23 S L36
L39 50 S L36 AND L5
L40 STR L36
L41 50 S L40 AND L5

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L42          STR L40
L43          19 S L42 AND L5
L44          236 S 31257-96-2/CRN
L45          2 S L44 AND L2
L46          1380 S 108-39-4/CRN
L47          1406 S 106-44-5/CRN
L48          2311 S L46 OR L47
L49          4 S L34 AND L46
L50          4 S L34 AND L48
L51          4 S L49 OR L50
L52          26389 S 50-00-0/CRN
L53          6 S L52 AND L32
L54          347 S L32 NOT L53
L55          3 S L54 AND L44
L56          2043 S 2628-17-3/CRN
L57          32 S L56 AND L32
L58          35 S L55 OR L57
L59          2 S L32 AND L48
L60          6 S L53 OR L59
L61          10 S L60 OR L51
L62          2 S L44 AND L34
L63          37 S L58 OR L62
L64          2 S L2 AND L63
L65          3 S L2 AND L61
              SAV L32 LEE036/A

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FILE 'HCAPLUS' ENTERED AT 15:48:59 ON 13 MAR 2006

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L66          29 S L63
L67          8 S L61

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=> d que 166

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L5          SCR 2043
L15         STR

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Ak~Cb~Ak      Ak~O~Ak      Ak~O~Ak~O~Ak      CH2=CH~O
@8  9  10     @11 12 13     @14 15 16 17 18     1  2  3

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G1 4          O~CH=CH2
              5  6  7

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VAR G1=AK/CB/8/11/14

NODE ATTRIBUTES:

DEFAULT MLEVEL IS ATOM

DEFAULT ECLEVEL IS LIMITED

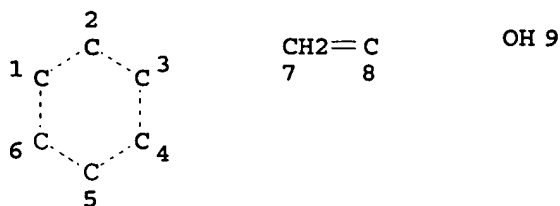
GRAPH ATTRIBUTES:

RING(S) ARE ISOLATED OR EMBEDDED

NUMBER OF NODES IS 18

STEREO ATTRIBUTES: NONE

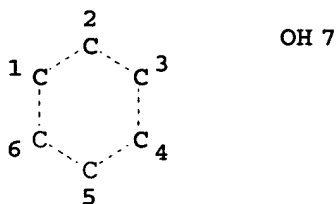
L28 STR



NODE ATTRIBUTES:
 DEFAULT MLEVEL IS ATOM
 DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:
 RSPEC 1
 NUMBER OF NODES IS 9

STEREO ATTRIBUTES: NONE
 L29 STR



NODE ATTRIBUTES:
 DEFAULT MLEVEL IS ATOM
 DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:
 RSPEC 1
 NUMBER OF NODES IS 7

STEREO ATTRIBUTES: NONE

L32	353	SEA FILE=REGISTRY	SSS FUL (L28 OR L29) AND L15 AND L5
L34	68	SEA FILE=REGISTRY	ABB=ON PLU=ON 130668-21-2/CRN
L44	236	SEA FILE=REGISTRY	ABB=ON PLU=ON 31257-96-2/CRN
L52	26389	SEA FILE=REGISTRY	ABB=ON PLU=ON 50-00-0/CRN
L53	6	SEA FILE=REGISTRY	ABB=ON PLU=ON L52 AND L32
L54	347	SEA FILE=REGISTRY	ABB=ON PLU=ON L32 NOT L53
L55	3	SEA FILE=REGISTRY	ABB=ON PLU=ON L54 AND L44
L56	2043	SEA FILE=REGISTRY	ABB=ON PLU=ON 2628-17-3/CRN
L57	32	SEA FILE=REGISTRY	ABB=ON PLU=ON L56 AND L32
L58	35	SEA FILE=REGISTRY	ABB=ON PLU=ON L55 OR L57
L62	2	SEA FILE=REGISTRY	ABB=ON PLU=ON L44 AND L34
L63	37	SEA FILE=REGISTRY	ABB=ON PLU=ON L58 OR L62
L66	29	SEA FILE=HCAPLUS	ABB=ON PLU=ON L63

=> fil hcap
 FILE 'HCAPLUS' ENTERED AT 15:50:05 ON 13 MAR 2006

=> d l66 1-29 ibib abs hitstr hitind

L66 ANSWER 1 OF 29 HCAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 2005:237967 HCAPLUS
 DOCUMENT NUMBER: 142:325916
 TITLE: Composition for antireflection film and resist pattern formation
 INVENTOR(S): Nakayama, Kazuhiko
 PATENT ASSIGNEE(S): Tokyo Ohka Kogyo Co., Ltd., Japan
 SOURCE: Jpn. Kokai Tokkyo Koho, 28 pp.
 CODEN: JKXXAF
 DOCUMENT TYPE: Patent
 LANGUAGE: Japanese
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2005070154	A2	20050317	JP 2003-209378	2003 0828

PRIORITY APPLN. INFO.:

JP 2003-209378

2003
0828

AB The composition, for forming the antireflection film under pos.-working photoresist layer, contains (A) a resin, (B) a compound generating an acid by irradiation, (C) a light absorbing agent, and (D) an organic solvent, in which the composition crosslinks by heating and changes from insol. to soluble in alkaline solution by the action of acid generated from B. The resist pattern is manufactured by the steps of (1) coating the composition on a support and heating for antireflection film formation, (2) coating the pos. photoresist on the antireflection film and heating, (3) selectively exposing, (4) post-exposure baking, and (5) developing by an aqueous alkaline solution. Mixing phenomena of the antireflection film and photoresist layer are prevented and the antireflection film can be removed without dry etching process.

IT 803688-39-3P, Cyclohexanedimethanol divinyl ether-hydroxystyrene copolymer

(antireflection film for pos. photoresist pattern formation)

RN 803688-39-3 HCAPLUS

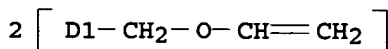
CN Phenol, ethenyl-, polymer with bis[(ethenyloxy)methyl]cyclohexane (9CI) (CA INDEX NAME)

CM 1

CRN 130668-21-2

CMF C12 H20 O2

CCI IDS



CM 2

CRN 31257-96-2

CMF C8 H8 O

CCI IDS



D1- OH

D1- CH=CH₂

IC ICM G03F007-11

ICS H01L021-027

CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)

IT 803688-36-0P, Cyclohexanedimethanol divinyl ether-formaldehyde-m-cresol copolymer 803688-39-3P, Cyclohexanedimethanol divinyl ether-hydroxystyrene copolymer
(antireflection film for pos. photoresist pattern formation)

L66 ANSWER 2 OF 29 HCAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 2005:235470 HCAPLUS

DOCUMENT NUMBER: 142:325909

TITLE: Lift-off resist material and formation of resist pattern with controlled width of under layer

INVENTOR(S): Nakayama, Kazuhiko; Harada, Hisanori; Takagi, Isamu

PATENT ASSIGNEE(S): Tokyo Ohka Kogyo Co., Ltd., Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 28 pp.

CODEN: JKXXAF

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
-----	----	-----	-----	
JP 2005070153	A2	20050317	JP 2003-209377	2003 0828
PRIORITY APPLN. INFO.:				2003 0828

AB The lift-off resist material, comprising (A) a resin, (B) a compound generating an acid by irradiation, and (C) an organic solvent, crosslinks by heating and changes from insol. to soluble in alkaline solution by the

action of acid generated from B. The lift-off resist pattern is manufactured by the steps of (1) forming an under resist layer by coating the lift-off resist material on a support and heating, (2) coating an upper resist layer comprising (non) chemical amplification-type pos. resist composition and heating, (3) selectively exposing, (4) post exposure baking, and (5) developing with an aqueous alkaline solution for forming resist pattern with cross section narrow at the interface between the support and the resist layer. The width of the under resist layer is controlled easily.

IT 803688-38-2P, Cyclohexanedimethanol divinyl
ether-hydroxystyrene-styrene copolymer
(lift-off resist material with under layer containing alkali-soluble
resin and acid generator)

RN 803688-38-2 HCAPLUS

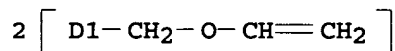
CN Phenol, ethenyl-, polymer with bis[(ethenyloxy)methyl]cyclohexane
and ethenylbenzene (9CI) (CA INDEX NAME)

CM 1

CRN 130668-21-2

CMF C12 H20 O2

CCI IDS



CM 2

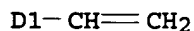
CRN 31257-96-2

CMF C8 H8 O

CCI IDS



D1-OH



CM 3

CRN 100-42-5

CMF C8 H8

 $H_2C=CH-Ph$

IC ICM G03F007-26
 ICS C08F008-00; C08G008-30; G03F007-039; G03F007-38; H01L021-027
 CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and
 Other Reprographic Processes)
 Section cross-reference(s): 38
 IT 803688-35-9P, Cyclohexanedimethanol divinyl ether-m-cresol-p-
 cresol-formaldehyde-salicylaldehyde copolymer **803688-38-2P**
 , Cyclohexanedimethanol divinyl ether-hydroxystyrene-styrene
 copolymer
 (lift-off resist material with under layer containing alkali-soluble
 resin and acid generator)

L66 ANSWER 3 OF 29 HCAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 2005:33915 HCAPLUS

DOCUMENT NUMBER: 142:103184

TITLE: Chemically amplified positive photoresist
 compositions and method for forming resist
 patterns for system LCD with excellent heat
 resistance and sensitivity

INVENTOR(S): Nakagawa, Yusuke; Hidesaka, Shinichi; Miyagi,
 Masaru; Harada, Hisanobu

PATENT ASSIGNEE(S): Tokyo Ohka Kogyo Co., Ltd., Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 22 pp.

CODEN: JKXXAF

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2005010213	A2	20050113	JP 2003-171027	2003 0616

PRIORITY APPLN. INFO.: JP 2003-171027

2003
0616

OTHER SOURCE(S): MARPAT 142:103184

AB The comps. with acid content ≤ 50 ppm contain alkali-soluble
 polymers, compds. $H_2C:CHOR_1OCH:CH_2$ [R_1 = (un)substituted C1-10
 alkylene, R_4mQR_4m ; R_4 = (un)substituted C1-10 alkylene; $m = 0, 1$],
 photoacid generators, and organic solvents. The method contains
 applying the comps. on substrates, prebaking them, selectively
 exposing the resist films via masks with patterns of ≤ 2.0
 μm and those of $> 2.0 \mu m$, post-exposure baking them, and
 developing them in alkaline solns., thus giving resist patterns for IC
 and those for LCD units simultaneously.

IT 819800-41-4P

(chemical amplified pos. photoresists for forming IC and LCD
 patterns on substrates simultaneously with good heat resistance
 and sensitivity)

RN 819800-41-4 HCAPLUS

CN Phenol, ethenyl-, polymer with 1,4-bis[(ethenyloxy)methyl]cyclohexane and ethenylbenzene (9CI) (CA INDEX NAME)

CM 1

CRN 31257-96-2

CMF C8 H8 O

CCI IDS



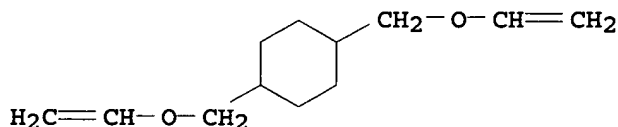
D1- OH

D1- CH=CH₂

CM 2

CRN 17351-75-6

CMF C12 H20 O2



CM 3

CRN 100-42-5

CMF C8 H8

H₂C=CH- Ph

IC ICM G03F007-039

ICS G03F007-004; G03F007-027; H01L021-027

CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)

IT 808750-79-0P 819800-41-4P

(chemical amplified pos. photoresists for forming IC and LCD patterns on substrates simultaneously with good heat resistance and sensitivity)

L66 ANSWER 4 OF 29 HCAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 2004:1037374 HCAPLUS

DOCUMENT NUMBER: 142:45895

TITLE: Chemically amplified positive photo resist

composition and method for forming resist pattern

INVENTOR(S): Maruyama, Kenji; Kurihara, Masaki; Miyagi, Ken; Niikura, Satoshi; Shimatani, Satoshi; Masujima, Masahiro; Nitta, Kazuyuki; Yamaguchi, Toshihiro; Doi, Kosuke

PATENT ASSIGNEE(S): Tokyo Ohka Kogyo Co., Ltd., Japan

SOURCE: PCT Int. Appl., 79 pp.
CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 2

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2004104702	A1	20041202	WO 2004-JP7139	2004 0519
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW RW: BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
US 2005244740	A1	20051103	US 2005-522036	2005 0119
PRIORITY APPLN. INFO.:			JP 2003-141805	A 2003 0520
			JP 2003-426503	A 2003 1224
			WO 2004-JP7139	W 2004 0519

AB The disclosed chemical amplified pos. photoresist composition which comprises an organic solvent and, dissolved therein, a resin being prepared through the reaction of a novolac resin or a hydroxystyrene resin with a crosslinking agent, being slightly soluble or insol. in an alkaline aqueous solution and exhibiting enhanced solubility into an aqueous alkali solution in the presence of an acid, and (B) a compound generating an acid by the irradiation with a radiation, wherein it contains an acid component in a amount of 10 ppm or less. The chemical amplified pos. photoresist composition can form a resist exhibiting good storage stability as a resist solution in a bottle.

IT 803688-38-2P, Hydroxystyrene-styrene-cyclohexanedimethanol divinyl ether copolymer 803688-39-3P

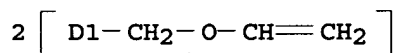
(pos. photoresist composition containing acid generator and)
 RN 803688-38-2 HCAPLUS
 CN Phenol, ethenyl-, polymer with bis[(ethenyloxy)methyl]cyclohexane
 and ethenylbenzene (9CI) (CA INDEX NAME)

CM 1

CRN 130668-21-2

CMF C12 H20 O2

CCI IDS

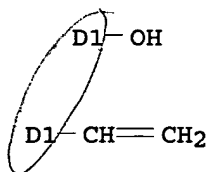
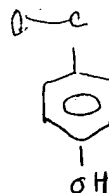


CM 2

CRN 31257-96-2

CMF C8 H8 O

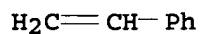
CCI IDS



CM 3

CRN 100-42-5

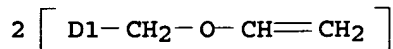
CMF C8 H8



RN 803688-39-3 HCAPLUS
 CN Phenol, ethenyl-, polymer with bis[(ethenyloxy)methyl]cyclohexane
 (9CI) (CA INDEX NAME)

CM 1

CRN 130668-21-2
 CMF C12 H20 O2
 CCI IDS



CM 2

CRN 31257-96-2
 CMF C8 H8 O
 CCI IDS



D1-OH



IC ICM G03F007-039
 CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)
 IT 24979-70-2P, p-Hydroxystyrene polymer 24979-74-6P,
 p-Hydroxystyrene-styrene copolymer 803688-35-9P,
 m-Cresol-p-cresol-formaldehyde-salicylaldehyde-
 cyclohexanedimethanol divinyl ether copolymer 803688-36-0P,
 m-Cresol-formaldehyde-cyclohexanedimethanol divinyl ether
 copolymer 803688-37-1P, m-Cresol-formaldehyde-salicylaldehyde-
 cyclohexanedimethanol divinyl ether copolymer 803688-38-2P
 , Hydroxystyrene-styrene-cyclohexanedimethanol divinyl ether
 copolymer 803688-39-3P
 (pos. photoresist composition containing acid generator and)
 REFERENCE COUNT: 17 THERE ARE 17 CITED REFERENCES AVAILABLE
 FOR THIS RECORD. ALL CITATIONS AVAILABLE
 IN THE RE FORMAT

L66 ANSWER 5 OF 29 HCAPLUS COPYRIGHT 2006 ACS on STN
 ACCESSION NUMBER: 2004:310382 HCAPLUS
 DOCUMENT NUMBER: 140:347657
 TITLE: Liquid crystal orientation film for liquid
 crystal display
 INVENTOR(S): Kawamura, Koichi; Kondo, Shunichi; Yamaoka,

PATENT ASSIGNEE(S): Tsugio; Watanabe, Hiroomi
 SOURCE: Fuji Photo Film Co., Ltd., Japan
 Jpn. Kokai Tokkyo Koho, 22 pp.
 CODEN: JKXXAF
 DOCUMENT TYPE: Patent
 LANGUAGE: Japanese
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2004117878	A2	20040415	JP 2002-281440	2002 0926

PRIORITY APPLN. INFO.: JP 2002-281440
 2002
 0926

AB The title liquid crystal orientation film is prepared by thermally crosslinking between a compound having ≥ 2 enol ether groups, $R_1C(R_2):C(R_3)O-$ [$R_1-3 = H$, alkyl, aryl; R_1-R_2 , R_2-R_3 , and R_3-R_1 may form ring], and a linear polymer compound having an acidic group or a hydroxyl group. By using the thermal crosslinking process, a good liquid crystal orientation is achieved without rubbing nor UV-irradiation processes.

IT 462637-02-1P
 (liquid crystal orientation film prepared by thermal crosslinking process for liquid crystal display)

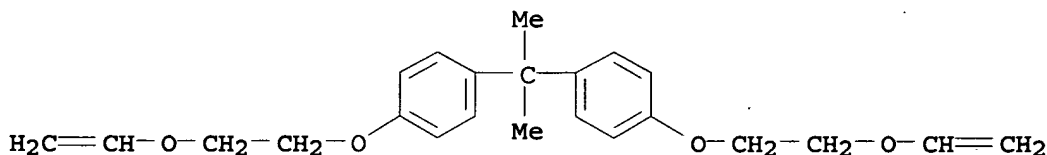
RN 462637-02-1 HCAPLUS

CN Phenol, 4-ethenyl-, polymer with 1,1'-(1-methylethylidene)bis[4-[2-(ethenyloxy)ethoxy]benzene] (9CI) (CA INDEX NAME)

CM 1

CRN 52411-04-8

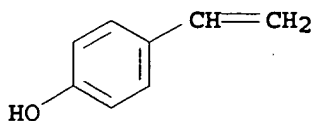
CMF C23 H28 O4



CM 2

CRN 2628-17-3

CMF C8 H8 O



IC ICM G02F001-1337
 ICS C08K005-06; C08L101-02
 CC 74-13 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)
 IT 462637-02-1P
 (liquid crystal orientation film prepared by thermal crosslinking process for liquid crystal display)

L66 ANSWER 6 OF 29 HCAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 2004:19898 HCAPLUS

DOCUMENT NUMBER: 140:84638

TITLE: N-sulfonyloxydicarboxyimides as photoacid generators for chemically amplified resists and patterning method

INVENTOR(S): Osawa, Yoichi; Kobayashi, Katsuhiko; Maeda, Kazunori; Miyakoshi, Hiroshi; Tanaka, Yoshio

PATENT ASSIGNEE(S): Shin-Etsu Chemical Industry Co., Ltd., Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 58 pp.

CODEN: JKXXAF

DOCUMENT TYPE: Patent

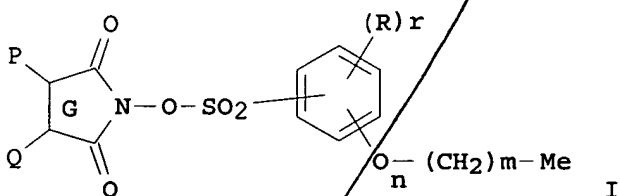
LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2004002291	A2	20040108	JP 2002-364156	2002 1216
PRIORITY APPLN. INFO.:			JP 2001-393187	A 2001 1226

OTHER SOURCE(S): MARPAT 140:84638
 GI



AB The N-sulfonyloxydicarboxyimides are I (R = H, F, C1-4 (cyclo)alkyl, C1-4 alkoxy; G = single bond, double bond, P, Q = H, C1-10 alkyl; P and Q may form alicyclic or heterocyclic structures or aromatic ring; m = 3-11; n = 0, 1; r = 0-4). The resists contain polymers changing alkali solubility by acid action and the N-sulfonyloxydicarboxyimides generating acids by radiation irradiation. The resists are patternwise exposed with radiation at ≤ 300 nm or electron beam via photomasks. The resists remain no foreign substances on developing and stripping.

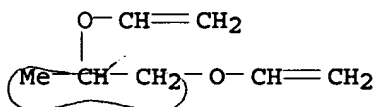
IT 369385-37-5D, ethoxyethyl ether

(N-sulfonyloxydicarboxyimides as photoacid generators for far-UV or electron beam resists remaining no foreign substances)

on stripping)
 RN 369385-37-5 HCAPLUS
 CN Phenol, 4-ethenyl-, polymer with 1,2-bis(ethenyloxy)propane (9CI)
 (CA INDEX NAME)

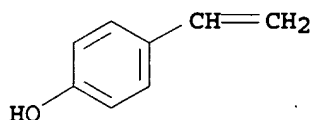
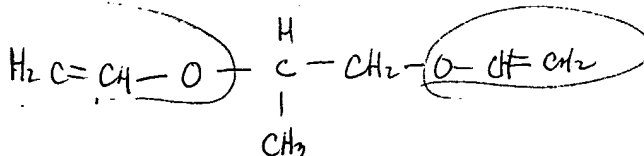
CM 1

CRN 71545-61-4
 CMF C7 H12 O2



CM 2

CRN 2628-17-3
 CMF C8 H8 O



IC ICM C07D207-408
 ICS C07D209-76; C07D491-18; C08F212-14; G03F007-004; G03F007-039;
 H01L021-027; H01L021-30
 CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and
 Other Reprographic Processes)
 Section cross-reference(s): 27
 IT 24979-70-2D, p-Hydroxystyrene homopolymer, ethoxyethyl ether
 130501-59-6 147625-42-1D, ethoxyethyl ether 159296-87-4,
 tert-Butyl acrylate-p-hydroxystyrene copolymer 326925-68-2,
 1-Ethylcyclopentyl methacrylate-p-hydroxystyrene copolymer
 345580-95-2, 1-Ethylcyclopentyl methacrylate-p-hydroxystyrene-
 styrene copolymer 369385-37-5D, ethoxyethyl ether
 406909-44-2 552840-49-0 595558-21-7 640277-35-6,
 p-Hydroxystyrene-indene copolymer tert-butoxycarboxylate ester
 (N-sulfonyloxydicarboxyimides as photoacid generators for
 far-UV or electron beam resists remaining no foreign substances
 on stripping)

L66 ANSWER 7 OF 29 HCAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 2003:912695 HCAPLUS

DOCUMENT NUMBER: 139:401547

TITLE: Photoacid generators and chemically amplified
 resist compositions for patterning process
 INVENTOR(S): Ohsawa, Youichi; Kobayashi, Katsuhiro;
 Takemura, Katsuya; Tsuchiya, Junji; Maeda,
 Kazunori

PATENT ASSIGNEE(S): Shin-Etsu Chemical Co., Ltd., Japan

SOURCE: U.S. Pat. Appl. Publ., 49 pp.

CODEN: USXXCO

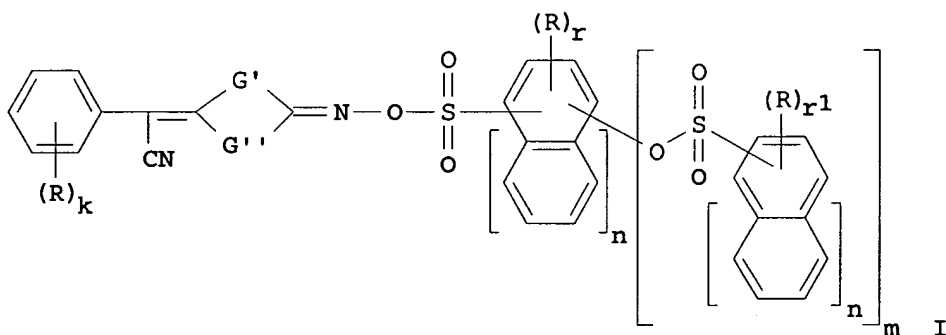
DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO. -----	KIND ----	DATE -----	APPLICATION NO. -----	DATE
US 2003215738	A1	20031120	US 2003-393006	2003 0321
US 6916591	B2	20050712		
JP 2004004614	A2	20040108	JP 2003-71473	2003 0317
PRIORITY APPLN. INFO.:			JP 2002-80649	A 2002 0322

OTHER SOURCE(S): MARPAT 139:401547
GI



AB Photoacid generators are provided by O-arylsulfonyl-oxime compds. having general formula I (R = H, F, Cl, NO₂, alkyl, alkoxy; n = 0, 1; m = 1, 2; r = 0-4; r1 = 0-5; k = 0-4; G1, G2 = S, -CH=CH-). Chemical amplified resist compns. comprising the photoacid generators have many advantages including improved resolution, improved focus latitude, minimized line width variation or shape degradation even on long-term PED, and improved pattern profile after development. Because of high resolution, the compns. are suited for microfabrication, especially by deep UV lithog.

IT 369385-37-5D, ethoxyethyl derivs.
(photoacid generators and chemical amplified resist compns. for patterning process)

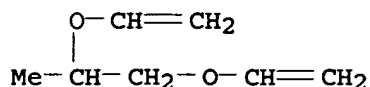
RN 369385-37-5 HCAPLUS

CN Phenol, 4-ethenyl-, polymer with 1,2-bis(ethenyloxy)propane (9CI)
(CA INDEX NAME)

CM 1

CRN 71545-61-4

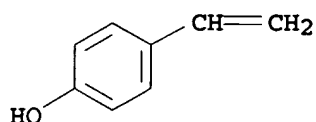
CMF C7 H12 O2



CM 2

CRN 2628-17-3

CMF C8 H8 O



IC ICM G03F007-004

ICS C07C309-76; C07D333-36

INCL 430270100; 430921000; 430919000; 430326000; 549063000; 558047000

CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)

Section cross-reference(s): 38

IT 24979-70-2D, Poly(p-hydroxystyrene), acetyl, ethoxyethyl and tert-butoxycarbonyl derivs. 159296-87-4, p-Hydroxystyrene-tert-butyl acrylate copolymer 326925-68-2, p-Hydroxystyrene-1-ethylcyclopentyl methacrylate copolymer 345580-95-2 369385-37-5D, ethoxyethyl derivs. 552840-49-0 552840-50-3 552840-52-5D, tert-butoxycarbonyl derivs. 552840-54-7

(photoacid generators and chemical amplified resist compns. for patterning process)

REFERENCE COUNT: 22 THERE ARE 22 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L66 ANSWER 8 OF 29 HCAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 2003:711621 HCAPLUS

DOCUMENT NUMBER: 139:252510

TITLE: N-Sulfonyloxydicarboxyimide compounds for use as photo acid generator in chemically amplified photoresists

INVENTOR(S): Osawa, Yoichi; Kobayashi, Katsuhiko; Maeda, Kazunori; Miyakoshi, Hiroshi; Tanaka, Yoshio
 PATENT ASSIGNEE(S): Shin-Etsu Chemical Industry Co., Ltd., Japan
 SOURCE: Jpn. Kokai Tokkyo Koho, 41 pp.

CODEN: JKXXAF

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2003252855	A2	20030910	JP 2002-364254	2002 1216

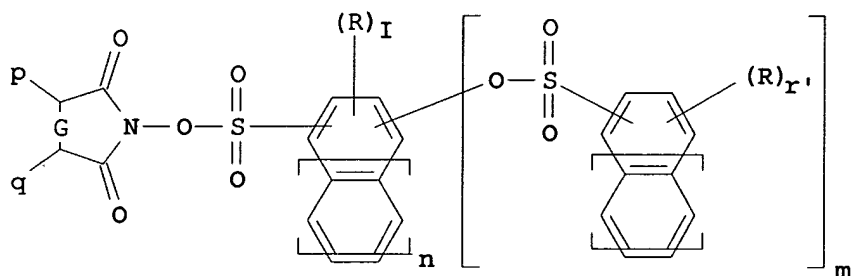
PRIORITY APPLN. INFO.:

JP 2001-393194

A

2001
1226OTHER SOURCE(S):
GI

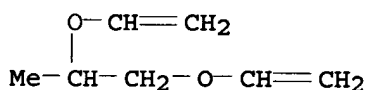
MARPAT 139:252510



I

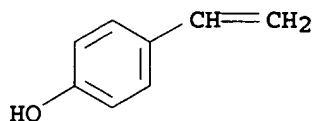
- AB N-Sulfonyloxydicarboxyimide compds. having general structure I is claimed to be used as photo acid-generator in chemical amplified photoresists (R = H, F, NO₂, alkyl, alkoxy; n = 0, 1; m = 1, 2; r = 0-4, r' = 0-5; G = single or double bond; p, q = H, alkyl, or form alicyclic ring, heterocyclic ring, or aromatic ring). A chemical amplified photoresist containing the acid generator is also claimed.
- IT 369385-37-5D, 2-ethoxyethyl ether
(chemical amplified photoresist containing N-sulfonyloxydicarboxyimide photo acid-generator)
- RN 369385-37-5 HCAPLUS
- CN Phenol, 4-ethenyl-, polymer with 1,2-bis(ethenyloxy)propane (9CI)
(CA INDEX NAME)

CM 1

CRN 71545-61-4
CMF C7 H12 O2

CM 2

CRN 2628-17-3
CMF C8 H8 O



IC ICM C07D207-408
 ICS C07D209-76; G03F007-004; G03F007-039; H01L021-027
 CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)
 IT 24979-70-2D, 2-ethoxyethyl ether 121273-79-8 121273-79-8D,
 2-ethoxyethyl ether 130501-59-6 159296-87-4 326925-68-2
 345580-95-2 369385-37-5D, 2-ethoxyethyl ether
 406909-44-2 595558-21-7 595559-74-3
 (chemical amplified photoresist containing N-sulfonyloxydicarboxyimide photo acid-generator)

L66 ANSWER 9 OF 29 HCAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 2002:802782 HCAPLUS

DOCUMENT NUMBER: 137:331071

TITLE: Photomask manufacture using
 alkaline-developable positive-working
 photoresist composition
 INVENTOR(S): Sakamizu, Toshio; Arai, Tadashi; Utaka, Sonoko
 PATENT ASSIGNEE(S): Hitachi Ltd., Japan
 SOURCE: Jpn. Kokai Tokkyo Koho, 9 pp.
 CODEN: JKXXAF

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2002311566	A2	20021023	JP 2001-117606	2001 0417

PRIORITY APPLN. INFO.: JP 2001-117606

2001
0417

AB The invention relates to a photomask manufacture utilizing an alkaline-developable pos.-working photoresist composition, wherein the photoresist composition comprises (A) a photoacid generator and (B) a polymer obtained by polymerizing a binder resin containing a carboxyl group and/or phenylic group, a vinyl ether compound, and a N-containing crosslinking agent, and the patterning is carried out by electron beams. The photoresist composition shows excellent properties and is suitable as a chemical amplification type.

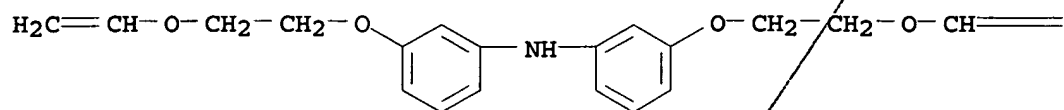
IT 473722-84-8P
 (photomask manufacture using alkaline-developable pos.-working photoresist composition containing)

RN 473722-84-8 HCAPLUS

CN Phenol, 4-ethenyl-, polymer with 3-[2-(ethenyloxy)ethoxy]-N-[3-[2-(ethenyloxy)ethoxy]phenyl]benzenamine and 1,1'-(1-methylethylidene)bis[4-[2-(ethenyloxy)ethoxy]benzene] (9CI) (CA INDEX NAME)

CM 1

CRN 473722-80-4
 CMF C20 H23 N O4

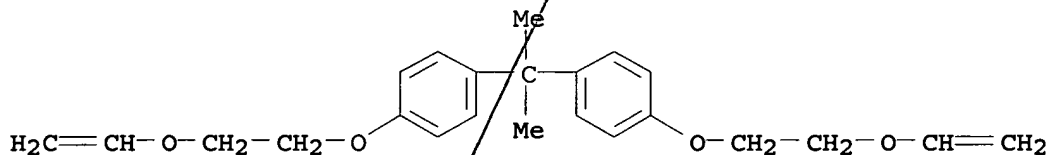


PAGE 1-B

=CH2

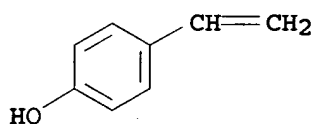
CM 2

CRN 52411-04-8
 CMF C23 H28 O4



CM 3

CRN 2628-17-3
 CMF C8 H8 O



IC ICM G03F001-08

ICS G03F001-08; G03F007-039; G03F007-20; G03F007-38; H01L021-027

CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and
 Other Reprographic Processes)

Section cross-reference(s): 38, 76

IT 473722-81-5P 473722-83-7P 473722-84-8P 473722-85-9P
 473722-86-0P 473722-87-1P 473722-88-2P 473722-89-3P
 473722-93-9P 473722-94-0P 473722-95-1P 473722-96-2P
 473722-97-3P

(photomask manufacture using alkaline-developable pos.-working
 photoresist composition containing)

L66 ANSWER 10 OF 29 HCAPLUS COPYRIGHT 2006 ACS on STN

USHA SHRESTHA EIC 1700 REM 4B28

ACCESSION NUMBER: 2002:544967 HCAPLUS
 DOCUMENT NUMBER: 137:263723
 TITLE: Vis-sensitive photopolymer containing vinyl ether compound and pyrromethene dye
 AUTHOR(S): Noppakundilokrat, Supaporn; Suzuki, Shota; Urano, Toshiyuki; Miyagawa, Nobukazu; Takahara, Shigeru; Yamaoka, Tsuguo
 CORPORATE SOURCE: Department of Image Science, Faculty of Engineering, Chiba University, Chiba, 263-8522, Japan
 SOURCE: Polymers for Advanced Technologies (2002), 13(7), 527-533
 CODEN: PADTE5; ISSN: 1042-7147
 PUBLISHER: John Wiley & Sons Ltd.
 DOCUMENT TYPE: Journal
 LANGUAGE: English

AB A visible light (vis)-sensitive photoresist based on the concept of chemical amplification was developed utilizing poly(p-hydroxystyrene) (PHS), 2,2-bis[4-(2-(vinylloxy)-ethoxy)phenyl]propane (BPA-DEVE) as a crosslinking agent, N-trifluoromethylsulfonyloxy-1,8-naphthalimide (NIT) as a photoacid generator (PAG) and pyrromethene dyes such as 1,3,5,7,9-pentamethylbipyrromethene difluoroborate (PRH) and 2,8-diethyl-1,3,5,7,9-pentamethylbipyrromethene difluoroborate (PRE) and 3,3'-carbonylbis(7,7'-diethylaminocoumarin) (KCD). On irradiation with an argon ion laser, the photopolymer comprising PRH and PRE exhibited a high sensitivity of 65 and 46 mJ cm⁻², resp. The sensitization mechanism of the pyrromethene dye/PAG system involves singlet electron transfer. The sensitivity of the photoresist increased with the decreasing mol. weight of PHS because of the high dissoln. rate.

IT 462637-02-1P
 (sensitization mechanism and sensitivity of vis-sensitive photopolymer containing vinyl ether compound and pyrromethene dye)

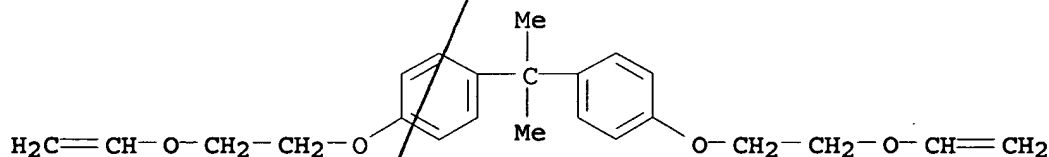
RN 462637-02-1 HCAPLUS

CN Phenol, 4-ethenyl-, polymer with 1,1'-(1-methylethylidene)bis[4-[2-(ethenyloxy)ethoxy]benzene] (9CI) (CA INDEX NAME)

CM 1

CRN 52411-04-8

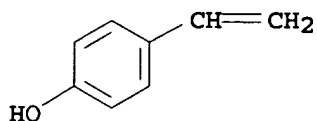
CMF C23 H28 O4



CM 2

CRN 2628-17-3

CMF C8 H8 O



CC 37-6 (Plastics Manufacture and Processing)

Section cross-reference(s): 74

IT 462637-02-1P

(sensitization mechanism and sensitivity of vis-sensitive photopolymer containing vinyl ether compound and pyrromethene dye)

REFERENCE COUNT: 29 THERE ARE 29 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L66 ANSWER 11 OF 29 HCAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 2002:538439 HCAPLUS

DOCUMENT NUMBER: 137:101421

TITLE: Radiation-sensitive resin compositions for chemically amplified deep UV resists and electron-beam resists

INVENTOR(S): Suzuki, Aki; Niwata, Koichi; Yokoyama, Kenichi; Kobayashi, Eiichi

PATENT ASSIGNEE(S): JSR Ltd., Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 23 pp.

CODEN: JKXXAF

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2002202603	A2	20020719	JP 2000-340798	2000 1108

PRIORITY APPLN. INFO.: JP 2000-323160 A 2000
1023

OTHER SOURCE(S): MARPAT 137:101421
GI

* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT
*

AB The compns. having high sensitivity to KrF or ArF excimer lasers, electron beams, etc., contain (A) radiation-sensitive acid generators I and/or II (R1, R2 = C1-10 linear, branched, or cyclic alkyl, C1-10 linear, branched, or cyclic fluoroalkyl, C6-11 aryl which may be substituted with F) and (B) resins containing repeating units of acetalated styrene derivs. such as p-(1-ethoxyethoxy)styrenes and p-hydroxystyrene. The compns. give sharp patterns with suppressed nanoedge roughness.

IT 259214-34-1, Diethylene glycol divinyl ether-ethyl vinyl

ether-p-hydroxystyrene copolymer

(partially crosslinked; radiation-sensitive resin compns. for chemical amplified deep UV resists and EB resists)

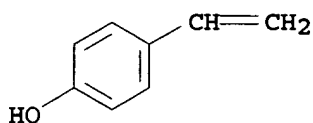
RN 259214-34-1 HCAPLUS

CN Phenol, 4-ethenyl-, polymer with ethoxyethene and 1,1'-[oxybis(2,1-ethanediylloxy)]bis[ethene] (9CI) (CA INDEX NAME)

CM 1

CRN 2628-17-3

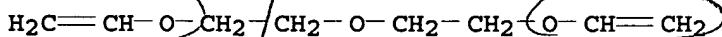
CMF C8 H8 O



CM 2

CRN 764-99-8

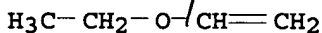
CMF C8 H14 O3



CM 3

CRN 109-92-2

CMF C4 H8 O



IC ICM G03F007-039

ICS C08K005-36; C08L025-18; C09K003-00; G03F007-004; H01L021-027

CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)

IT 259214-34-1, Diethylene glycol divinyl ether-ethyl vinyl ether-p-hydroxystyrene copolymer

(partially crosslinked; radiation-sensitive resin compns. for chemical amplified deep UV resists and EB resists)

L66 ANSWER 12 OF 29 HCAPLUS COPYRIGHT 2006 ACS on STN

2002:407173 HCAPLUS

136:409029

Chemically amplified radiation-sensitive resists with small nanoedge roughness

Suzuki, Aki; Murata, Makoto; Hara, Hiromichi;

Kobayashi, Eiichi

Jsr Ltd., Japan

Jpn. Kokai Tokkyo Koho, 28 pp.

CODEN: JKXXAF

Patent

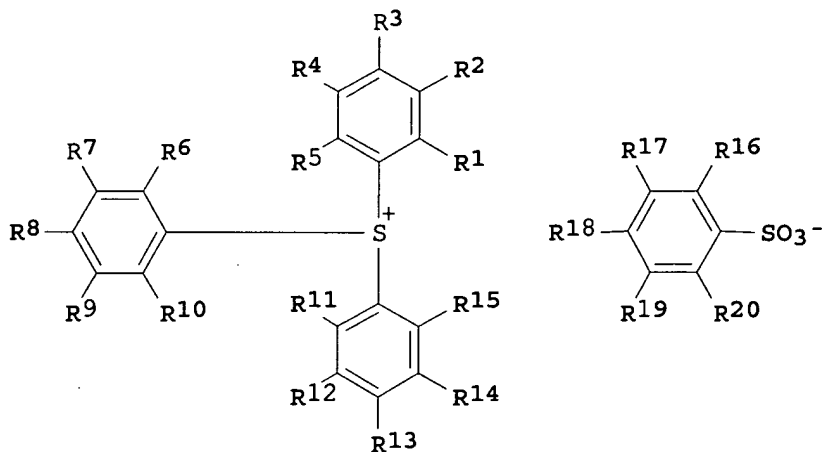
Japanese

USHA SHRESTHA EIC 1700 REM 4B28

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO. -----	KIND ----	DATE -----	APPLICATION NO. -----	DATE
JP 2002156759	A2	20020531	JP 2000-350227	2000 1116
US 2002090569	A1	20020711	US 2001-987916	2001 1116
US 6899989	B2	20050531		
US 2005158657	A1	20050721	US 2005-80400	2005 0316
PRIORITY APPLN. INFO.:			JP 2000-350227	A 2000 1116
			US 2001-987916	A1 2001 1116

OTHER SOURCE(S): MARPAT 136:409029
GI

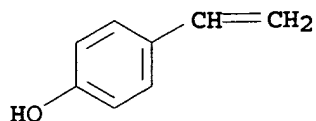
- AB The resists, suited for microlithog. in fabrication of integrated circuit devices, contain triarylsulfonium compds. I [R1-15 = H, OH, C1-10 alkyl(oxy), tert-butoxycarbonylmethoxy; ≥ 2 of R1-5 and ≥ 2 of R6-15 are groups excluding H; R16-20 = H, F, CF₃; $\geq 1-5$ of R16-20 are F or CF₃] as radiation-sensitive acid generators and resins having 4-hydroxystyrene units and [HC[p-C₆H₄OH(R₂₁)(OR₂₂)]CH₂] (R₂₁ = Me, Et; R₂₂ = C1-6 alkyl).
- IT 431059-78-8D, partially acetalized
(chemical amplified radiation-sensitive resists containing sp. arylsulfonium compds. and showing small edge roughness)
- RN 431059-78-8 HCAPLUS

CN Phenol, 4-ethenyl-, polymer with 1,1'-[oxybis(2,1-ethanediylloxy)]bis[ethene] (9CI) (CA INDEX NAME)

CM 1

CRN 2628-17-3

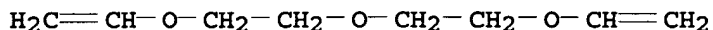
CMF C8 H8 O



CM 2

CRN 764-99-8

CMF C8 H14 O3



IC ICM G03F007-039

ICS C08K005-375; C08K005-42; C08L025-18; C09K003-00; G03F007-004; H01L021-027

CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)

Section cross-reference(s): 38, 76

IT 24979-70-2D, Poly(p-hydroxystyrene), partially acetalized
24979-74-6D, p-Hydroxystyrene-styrene copolymer, partially acetalized
159296-87-4D, tert-Butyl acrylate-p-hydroxystyrene copolymer, partially acetalized
431059-78-8D, partially acetalized

(chemical amplified radiation-sensitive resists containing sp. arylsulfonium compds. and showing small edge roughness)

L66 ANSWER 13 OF 29 HCAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 2002:388491 HCAPLUS

DOCUMENT NUMBER: 136:409018

TITLE: Lithographic production of stamper for optical disk by using x ray-sensitive positive-working resist as mask

INVENTOR(S): Sakamizu, Toshio; Shiraishi, Hiroshi

PATENT ASSIGNEE(S): Hitachi Ltd., Japan

SOURCE: Jpn. Kokai Tokyo Koho, 8 pp.

CODEN: JKXXAF

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2002150620	A2	20020524	JP 2000-341912	2000 1109

PRIORITY APPLN. INFO.:

JP 2000-341912

2000

1109

AB In the production, the resist is an alkali-developable and contains a photoacid generator, and a medium whose solubility to alkalies increases and weight average mol. weight decreases to $\leq 1/2$ that of before, upon exposure to light. The resist provides high-resolution and precise pattern.

IT 428821-90-3P 428821-91-4P, 1,4-Cyclohexanedimethanol divinyl ether-vinylphenol copolymer (resist component; lithog. production of stamper for optical disk manufacture by using patterned pos.-working resist as mask)

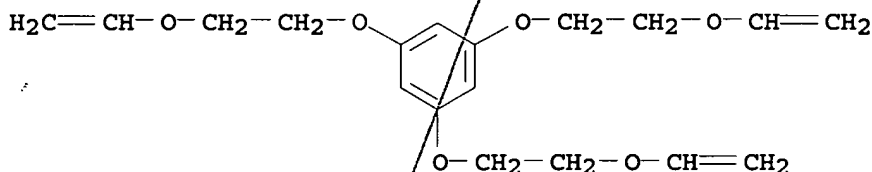
RN 428821-90-3 HCAPLUS

CN Phenol, ethenyl-, polymer with 1,3,5-tris[2-(ethenyloxy)ethoxy]benzene (9CI) (CA INDEX NAME)

CM 1

CRN 142248-13-3

CMF C18 H24 O6



CM 2

CRN 31257-96-2

CMF C8 H8 O

CCI IDS



D1-OH

D1-CH=CH2

RN 428821-91-4 HCAPLUS

CN Phenol, ethenyl-, polymer with 1,4-bis[(ethenyloxy)methyl]cyclohexane (9CI) (CA INDEX NAME)

CM 1

CRN 31257-96-2

CMF C8 H8 O

CCI IDS



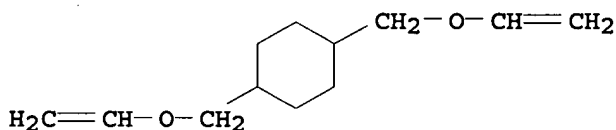
D1-OH

D1-CH=CH₂

CM 2

CRN 17351-75-6

CMF C12 H20 O2



IC ICM G11B007-26
 ICS G03F007-039; G03F007-26; G03F007-40
 CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and
 Other Reprographic Processes)
 Section cross-reference(s): 38
 IT 428821-90-3P 428821-91-4P, 1,4-
 Cyclohexanedimethanol divinyl ether-vinylphenol copolymer
 428821-92-5P 428821-93-6P 428821-94-7P
 (resist component; lithog. production of stamper for optical disk
 manufacture by using patterned pos.-working resist as mask)

L66 ANSWER 14 OF 29 HCAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 2002:347375 HCAPLUS

DOCUMENT NUMBER: 136:361822

TITLE: Sulfonium or iodonium naphthalenesulfonate,
 photosensitive acid-generating agent for
 photoresist, photoresist material, and method
 for patterning

INVENTOR(S): Osawa, Yoichi; Watanabe, Atsushi; Nagata,
 Takashi; Hatakeyama, Jun

PATENT ASSIGNEE(S): Shin-Etsu Chemical Industry Co., Ltd., Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 39 pp.

CODEN: JKXXAF

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

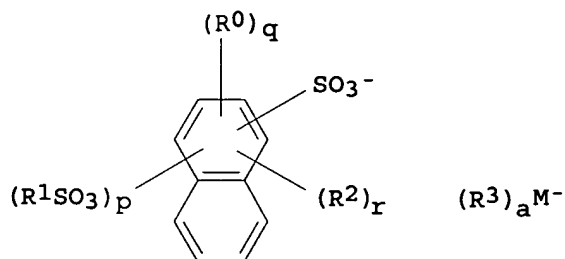
FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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JP 2002128758	A2	20020509	JP 2000-322189	2000 1023
TW 594402	B	20040621	TW 2001-90126078	2001 1022
US 2002076643	A1	20020620	US 2001-983155	2001 1023
US 6692893	B2	20040217		
PRIORITY APPLN. INFO.:			JP 2000-322189	A 2000 1023

OTHER SOURCE(S): MARPAT 136:361822
GI.



AB The onium salt is that represented as I [R1 = C6-14 (substituted) aryl; R2 = H, (substituted) C1-6 linear, branched, or cyclic alkyl; R0 = OH, alkoxy, halogen, NO2; p = 1, 2; q, r = 0-2; R3 = (substituted) C1-10 linear, branched, or cyclic alkyl, (substituted) C6-14 aryl; M = S and a = 3; M = iodine and a = 2], which is used as the photosensitive acid-generating agent in the chemical amplified photoresist. The photoresist material contains a resin whose alkaline developer solubility is changed by activity of acids and the above agent. The photoresist material is applied on a substrate, heated, exposed to a high-energy beam or electron beam with wavelength ≤ 300 nm, and developed optionally after postbaking. The photoresist shows good stability in post exposure delay (PED).

IT 326925-72-8 326925-73-9
(sulfonium or iodonium naphthalenesulfonate as photosensitive acid-generating agent in chemical-amplified photoresist)

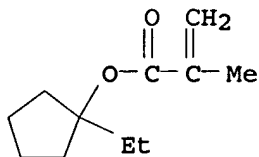
RN 326925-72-8 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, 1-ethylcyclopentyl ester, polymer with 1,2-bis(ethenyloxy)propane and 4-ethenylphenol (9CI) (CA INDEX NAME)

CM 1

CRN 266308-58-1

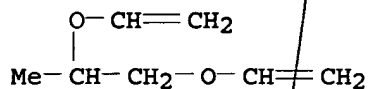
CMF C11 H18 O2



CM 2

CRN 71545-61-4

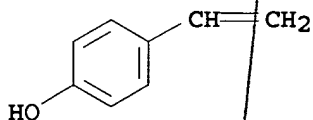
CMF C7 H12 O2



CM 3

CRN 2628-17-3

CMF C8 H8 O



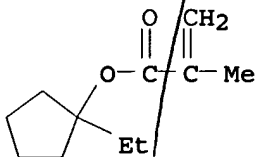
RN 326925-73-9 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, 1-ethylcyclopentyl ester, polymer
with 1,2-bis(ethenyloxy)propane, 1,1-dimethylethyl 4-ethenylphenyl
carbonate and 4-ethenylphenol (9CI) (CA INDEX NAME)

CM 1

CRN 266308-58-1

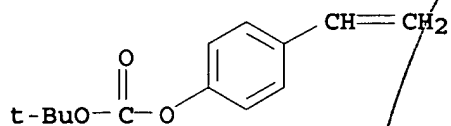
CMF C11 H18 O2



CM 2

CRN 87188-51-0

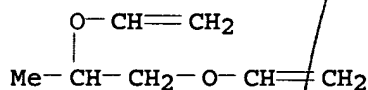
CMF C13 H16 O3



CM 3

CRN 71545-61-4

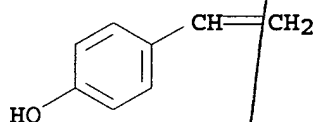
CMF C7 H12 O2



CM 4

CRN 2628-17-3

CMF C8 H8 O



IC ICM C07C181-12

ICS C07C025-02; C07C309-35; C07C309-74; C08K005-09; C08K005-16;
C08K005-42; C08L025-18; C08L033-02; C09K003-00; G03F007-004;
H01L021-027CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and
Other Reprographic Processes)
Section cross-reference(s): 23IT 24979-70-2D, Poly(p-hydroxystyrene), partially etherified and
esterified 71545-61-4D, polyhydroxystyrene crosslinked with
161453-44-7 195723-94-5, [4-(tert-Butoxy)phenyl]diphenylsulfoni-
um 10-camphorsulfonate 326925-68-2, 1-Ethylcyclopentyl
methacrylate-p-hydroxystyrene copolymer 326925-71-7
326925-72-8 326925-73-9 345580-95-2,
1-Ethylcyclopentyl methacrylate-p-hydroxystyrene-styrene copolymer
422309-72-6(sulfonium or iodonium naphthalenesulfonate as photosensitive
acid-generating agent in chemical-amplified photoresist)

L66 ANSWER 15 OF 29 HCAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 2001:817219 HCAPLUS

DOCUMENT NUMBER: 135:350570

TITLE: Chemically amplified positive resist
compositions with improved resolution, pattern
profile and focal latitude for deep UV
lithographyINVENTOR(S): Ohsawa, Youichi; Watanabe, Jun; Takeda,
Takanobu; Seki, Akihiro

PATENT ASSIGNEE(S): Shin-Etsu Chemical Co., Ltd., Japan
 SOURCE: U.S. Pat. Appl. Publ., 33 pp.
 CODEN: USXXCO
 DOCUMENT TYPE: Patent
 LANGUAGE: English
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 2001038971	A1	20011108	US 2001-799052	2001 0306
US 6682869	B2	20040127		
JP 2001324813	A2	20011122	JP 2001-57719	2001 0302
TW 538312	B	20030621	TW 2001-90105205	2001 0306
PRIORITY APPLN. INFO.:			JP 2000-61350	A 2000 0307

AB A chemical amplified, pos. resist composition is provided comprising (A) a photoacid generator and (B) a resin which changes its solubility in an alkali developer under the action of acid and has substituents of the formula: $\text{Ph}-(\text{CH}_2)_n\text{OCH}(\text{CH}_2\text{CH}_3)-$ ($n = 0, 1$). The composition has many advantages including improved focal latitude, improved resolution, minimized line width variation or shape degradation even on long-term PED, minimized defect left after coating, development and stripping, and improved pattern profile after development and is suited for microfabrication by any lithog., especially deep UV lithog.

IT 362478-99-7D, 1,4-Butanediol divinyl ether-p-hydroxystyrene-1-ethylcyclopentyl methacrylate copolymer, 1-benzyloxypropyl derivs. 362479-00-3D, 1,4-Butane diol divinyl ether-p-hydroxystyrene copolymer, 1-phenethyloxypropyl derivs. 369385-37-5D, p-Hydroxystyrene-1,2-Bis(vinyloxy)propane copolymer, 1-benzyloxypropyl and 1-ethoxypropyl derivs.

(chemical amplified pos. resist compns. with improved resolution, pattern profile and focal latitude for deep UV lithog.)

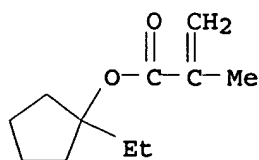
RN 362478-99-7 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, 1-ethylcyclopentyl ester, polymer with 1,4-bis(ethenyloxy)butane and 4-ethenylphenol (9CI) (CA INDEX NAME)

CM 1

CRN 266308-58-1

CMF C11 H18 O2



CM 2

CRN 3891-33-6

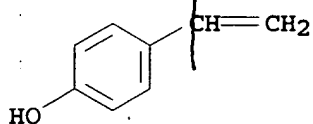
CMF C8 H14 O2



CM 3

CRN 2628-17-3

CMF C8 H8 O



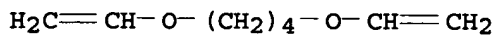
RN 362479-00-3 HCAPLUS

CN Phenol, 4-ethenyl-, polymer with 1,4-bis(ethenyloxy)butane (9CI)
(CA INDEX NAME)

CM 1

CRN 3891-33-6

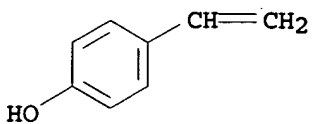
CMF C8 H14 O2



CM 2

CRN 2628-17-3

CMF C8 H8 O



RN 369385-37-5 HCAPLUS

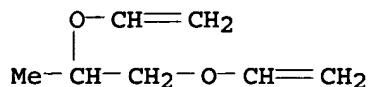
CN Phenol, 4-ethenyl-, polymer with 1,2-bis(ethenyloxy)propane (9CI)

(CA INDEX NAME)

CM 1

CRN 71545-61-4

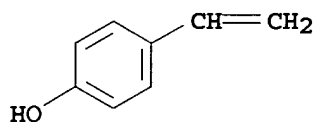
CMF C7 H12 O2



CM 2

CRN 2628-17-3

CMF C8 H8 O



IC ICM G03F007-004

INCL 430270100

CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)

IT 159296-87-4D, tert-Butyl acrylate-p-hydroxystyrene copolymer, 1-benzyloxypropyl derivs. 200808-68-0D, tert-Butyl acrylate-p-hydroxystyrene-styrene copolymer, 1-benzyloxypropyl derivs. 326925-68-2, p-Hydroxystyrene-1-ethylcyclopentyl methacrylate copolymer 326925-68-2D, p-Hydroxystyrene-1-ethylcyclopentyl methacrylate copolymer, 1-benzyloxypropyl derivs. 362478-99-7D, 1,4-Butanediol divinyl ether-p-hydroxystyrene-1-ethylcyclopentyl methacrylate copolymer, 1-benzyloxypropyl derivs. 362479-00-3D, 1,4-Butane diol divinyl ether-p-hydroxystyrene copolymer, 1-phenethyloxypropyl derivs. 369385-37-5D, p-Hydroxystyrene-1,2-Bis(vinyloxy)propane copolymer, 1-benzyloxypropyl and 1-ethoxypropyl derivs.

(chemical amplified pos. resist compns. with improved resolution, pattern profile and focal latitude for deep UV lithog.)

L66 ANSWER 16 OF 29 HCAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 2001:781404 HCAPLUS

DOCUMENT NUMBER: 135:336907

TITLE: Chemically amplified positive resist compositions with improved resolution, pattern profile and focal latitude for deep UV lithography

INVENTOR(S): Ohsawa, Youichi; Watanabe, Jun; Takeda, Takano; Seki, Akihiro

PATENT ASSIGNEE(S): Shi-Etsu Chemical Co., Ltd., Japan

SOURCE: U.S. Pat. Appl. Publ., 34 pp.

CODEN: USXXCO

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 2001033994	A1	20011025	US 2001-799009	2001 0306
US 6838224	B2	20050104		
JP 2001324812	A2	20011122	JP 2001-57716	2001 0302
TW 587086	B	20040511	TW 2001-90105203	2001 0306
PRIORITY APPLN. INFO.:			JP 2000-61357	A 2000 0307

AB A chemical amplified, pos. resist composition is provided comprising (A) a photoacid generator and (B) a resin which changes its solubility in an alkali developer under the action of acid and has substituents of the formula: C₆H₁₁ - (CH₂)_nOCH(CH₂CH₃) - wherein C₆H₁₁ is cyclohexyl and n = 0,1. The composition has many advantages including improved focal latitude, improved resolution, minimized line width variation or shape degradation even on long-term PED, minimized defect left after coating, development and stripping, and improved pattern profile after development and is suited for microfabrication by any lithog., especially deep UV lithog.

IT 362478-99-7D, 1,4-Butanediol divinyl ether-p-hydroxystyrene-1-ethylcyclopentyl methacrylate copolymer, cyclohexyloxypropyl ethers 362479-00-3D, 1,4-Butane diol divinyl ether-p-hydroxystyrene copolymer, cyclohexylmethyloxypropyl derivs. 369385-37-5D, p-Hydroxystyrene-1,2-Bis(vinyloxy)propane copolymer, cyclohexyloxypropyl and 1-ethoxypropyl derivs.
(chemical amplified pos. resist compns. with improved resolution, pattern profile and focal latitude for deep UV lithog.)

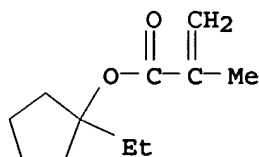
RN 362478-99-7 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, 1-ethylcyclopentyl ester, polymer with 1,4-bis(ethenyloxy)butane and 4-ethenylphenol (9CI) (CA INDEX NAME)

CM 1

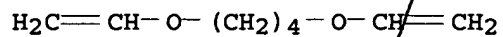
CRN 266308-58-1

CMF C11 H18 O2



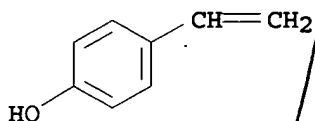
CM 2

CRN 3891-33-6
CMF C8 H14 O2



CM 3

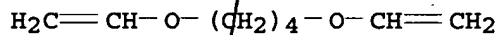
CRN 2628-17-3
CMF C8 H8 O



RN 362479-00-3 HCAPLUS
CN Phenol, 4-ethenyl-, polymer with 1,4-bis(ethenyloxy)butane (9CI)
(CA INDEX NAME)

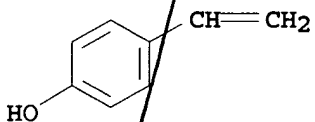
CM 1

CRN 3891-33-6
CMF C8 H14 O2



CM 2

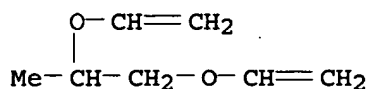
CRN 2628-17-3
CMF C8 H8 O



RN 369385-37-5 HCAPLUS
CN Phenol, 4-ethenyl-, polymer with 1,2-bis(ethenyloxy)propane (9CI)
(CA INDEX NAME)

CM 1

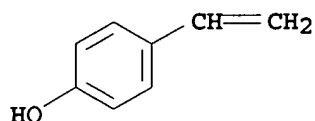
CRN 71545-61-4
CMF C7 H12 O2



CM 2

CRN 2628-17-3

CMF C8 H8 O



IC ICM G03F007-039

INCL 430287100

CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)

IT 159296-87-4D, tert-Butyl acrylate-p-hydroxystyrene copolymer, cyclohexyloxypropyl ethers 200808-68-0D, tert-Butyl acrylate-p-hydroxystyrene-styrene copolymer, cyclohexyloxypropyl ethers 326925-68-2, p-Hydroxystyrene-1-ethylcyclopentyl methacrylate copolymer 326925-68-2D, p-Hydroxystyrene-1-ethylcyclopentyl methacrylate copolymer, cyclohexyloxypropyl ethers 362478-99-7D, 1,4-Butanediol divinyl ether-p-hydroxystyrene-1-ethylcyclopentyl methacrylate copolymer, cyclohexyloxypropyl ethers 362479-00-3D, 1,4-Butane diol divinyl ether-p-hydroxystyrene copolymer, cyclohexylmethyloxypropyl derivs. 369385-37-5D, p-Hydroxystyrene-1,2-Bis(vinyloxy)propane copolymer, cyclohexyloxypropyl and 1-ethoxypropyl derivs.

(chemical amplified pos. resist compns. with improved resolution, pattern profile and focal latitude for deep UV lithog.)

REFERENCE COUNT: 17 THERE ARE 17 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L66 ANSWER 17 OF 29 HCAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 2001:763485 HCAPLUS

DOCUMENT NUMBER: 135:310937

TITLE: Chemical amplification resist compositions

INVENTOR(S): Takeda, Takanobu; Watanabe, Osamu; Hirahara, Kazuhiro; Takemura, Katsuya; Kusaki, Wataru; Seki, Akihiro

PATENT ASSIGNEE(S): Shin-Etsu Chemical Co., Ltd., Japan.

SOURCE: U.S. Pat. Appl. Publ., 12 pp.

CODEN: USXXCO

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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US 2001031421	A1	20011018	US 2001-800512	2001 0308
US 6737214	B2	20040518		
JP 2001324814	A2	20011122	JP 2001-59519	2001 0305
TW 538088	B	20030621	TW 2001-90105442	2001 0308
PRIORITY APPLN. INFO.:			JP 2000-64277	A 2000 0309

AB A chemical amplification pos. resist composition comprises a polymeric mixture of a polyhydroxystyrene derivative having a mol. weight of 1000-500,000 and a copolymer of hydroxystyrene and (meth)acrylate having a mol. weight of 1000-500,000, as a base resin, has improved dry etching resistance, high sensitivity, high resolution, and process adaptability, and is suppressed in the slimming of pattern films after development with aqueous base.

IT 362478-99-7, 1,4-Butanediol divinyl ether-1-ethylcyclopentyl methacrylate-p-hydroxystyrene copolymer
362479-00-3D, 1,4-Butanediol divinyl ether-p-hydroxystyrene copolymer, ethoxyethyl ether
(chemical amplification resist compns. containing)

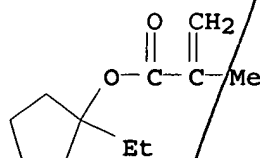
RN 362478-99-7 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, 1-ethylcyclopentyl ester, polymer with 1,4-bis(ethenyloxy)butane and 4-ethenylphenol (9CI) (CA INDEX NAME)

CM 1

CRN 266308-58-1

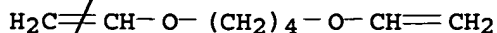
CMF C11 H18 O2



CM 2

CRN 3891-33-6

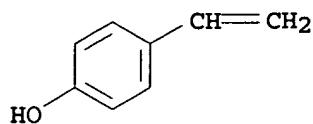
CMF C8 H14 O2



CM 3

CRN 2628-17-3

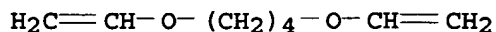
CMF C8 H8 O



RN 362479-00-3 HCAPLUS
 CN Phenol, 4-ethenyl-, polymer with 1,4-bis(ethenyloxy)butane (9CI)
 (CA INDEX NAME)

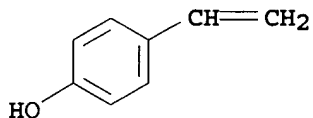
CM 1

CRN 3891-33-6
 CMF C8 H14 O2



CM 2

CRN 2628-17-3
 CMF C8 H8 O



IC ICM G03F007-004
 INCL 430270100
 CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and
 Other Reprographic Processes)
 Section cross-reference(s): 38
 IT 24979-70-2D, Poly(p-hydroxystyrene), ethoxyethyl ether and
 t-butylcarbonate 362478-98-6, 1-Ethylcyclopentyl
 methacrylate-p-hydroxystyrene-isobornyl acrylate copolymer
 362478-99-7, 1,4-Butanediol divinyl ether-1-
 ethylcyclopentyl methacrylate-p-hydroxystyrene copolymer
 362479-00-3D, 1,4-Butanediol divinyl ether-p-
 hydroxystyrene copolymer, ethoxyethyl ether 362479-01-4
 (chemical amplification resist comps. containing)

L66 ANSWER 18 OF 29 HCAPLUS COPYRIGHT 2006 ACS on STN
 ACCESSION NUMBER: 2001:709843 HCAPLUS
 DOCUMENT NUMBER: 135:264558
 TITLE: Chemically amplified positive resist
 composition and patterning method
 INVENTOR(S): Takeda, Takanobu; Watanabe, Jun; Takemura,
 Katsuya; Koizumi, Kenji
 PATENT ASSIGNEE(S): Shin-Etsu Chemical Co., Ltd., Japan
 SOURCE: Eur. Pat. Appl., 60 pp.
 CODEN: EPXXDW
 DOCUMENT TYPE: Patent
 LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 1136885	A1	20010926	EP 2001-302636	2001 0321
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO				
JP 2001337457	A2	20011207	JP 2001-75477	2001 0316
TW 228203	B1	20050221	TW 2001-90106640	2001 0321
US 2001035394	A1	20011101	US 2001-814049	2001 0322
US 6593056	B2	20030715		
PRIORITY APPLN. INFO.:			JP 2000-79414	A 2000 0322

AB A chemical amplified, pos. resist composition comprises (1) organic solvent, (2) polymer having acid labile groups, (3) photoacid generator, (4) basic compound, and (5) compound containing at least two allyloxy groups of R1R2C=CR3CHR4O (R1,4 = H, C1-12 alkyl; R1 and R3, or R2 and R3 may form a ring) in a mol. The resist composition has a high sensitivity, resolution, dry etching resistance and process adaptability, and is improved in the slimming of a pattern film after development with an aqueous base solution. The resist composition is also applicable to the thermal flow process suited for forming a microsize contact hole pattern for the fabrication of VLSI.

IT 338438-45-2 362478-99-7 362479-00-3D,
ethoxypropyl ether or ethoxyethyl ether 362479-04-7D,
ethoxypropyl ether or ethoxyethyl ether 362479-05-8D,
ethoxypropyl ether or ethoxyethyl ether 362479-06-9D,
ethoxypropyl ether or ethoxyethyl ether 362479-07-0D,
ethoxypropyl ether or ethoxyethyl ether 362479-08-1D,
ethoxypropyl ether or ethoxyethyl ether 362479-12-7
362479-12-7D, ethoxyethyl ether and/or t-Bu carbonate
and/or ethoxypropyl ether and/or t-butoxycarbonyl Me derivs.
362479-15-0

(chemical amplified pos. resist composition containing)

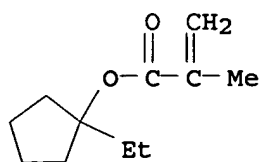
RN 338438-45-2 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, 1-ethylcyclopentyl ester, polymer
with 1,4-bis(ethenyloxy)butane, 1-ethenyl-4-(1-ethoxyethoxy)benzene and 4-ethenylphenol (9CI) (CA INDEX NAME)

CM 1

CRN 266308-58-1

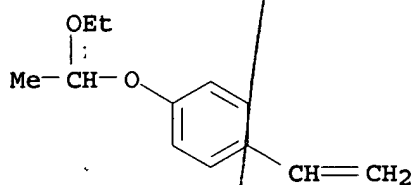
CMF C11 H18 O2



CM 2

CRN 157057-20-0

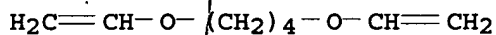
CMF C12 H16 O2



CM 3

CRN 3891-33-6

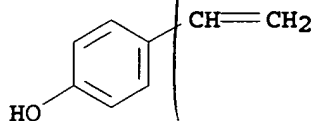
CMF C8 H14 O2



CM 4

CRN 2628-17-3

CMF C8 H8 O



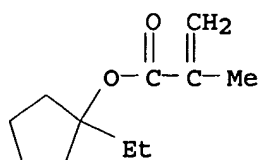
RN 362478-99-7 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, 1-ethylcyclopentyl ester, polymer
with 1,4-bis(ethenoxy)butane and 4-ethenylphenol (9CI) (CA
INDEX NAME)

CM 1

CRN 266308-58-1

CMF C11 H18 O2



CM 2

CRN 3891-33-6

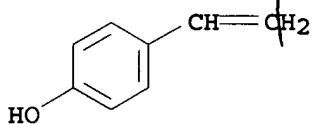
CMF C8 H14 O2



CM 3

CRN 2628-17-3

CMF C8 H8 O



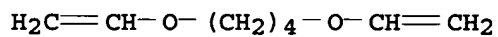
RN 362479-00-3 HCAPLUS

CN Phenol, 4-ethenyl-, polymer with 1,4-bis(ethenyloxy)butane (9CI)
(CA INDEX NAME)

CM 1

CRN 3891-33-6

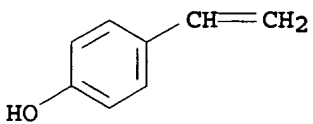
CMF C8 H14 O2



CM 2

CRN 2628-17-3

CMF C8 H8 O



RN 362479-04-7 HCAPLUS

CN Phenol, 4-ethenyl-, polymer with 1,4-bis(ethenyloxy)butane and

1,4-bis(2-propenyloxy)butane (9CI) (CA INDEX NAME)

CM 1

CRN 3891-33-6

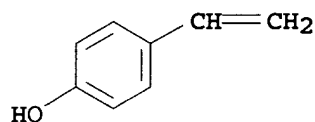
CMF C8 H14 O2



CM 2

CRN 2628-17-3

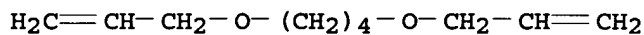
CMF C8 H8 O



CM 3

CRN 1471-16-5

CMF C10 H18 O2



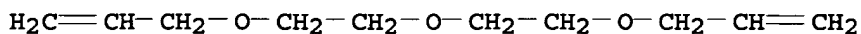
RN 362479-05-8 HCAPLUS

CN Phenol, 4-ethenyl-, polymer with 1,4-bis(ethenyloxy)butane and 3,3'-[oxybis(2,1-ethanediylloxy)]bis[1-propene] (9CI) (CA INDEX NAME)

CM 1

CRN 57947-82-7

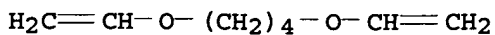
CMF C10 H18 O3



CM 2

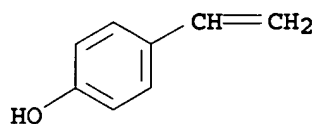
CRN 3891-33-6

CMF C8 H14 O2



CM 3

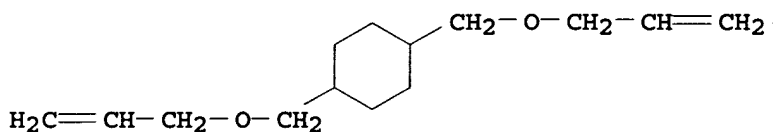
CRN 2628-17-3
CMF C8 H8 O



RN 362479-06-9 HCAPLUS
CN Phenol, 4-ethenyl-, polymer with 1,4-bis(ethenyloxy)butane and 1,4-bis[(2-propenyloxy)methyl]cyclohexane (9CI) (CA INDEX NAME)

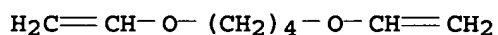
CM 1

CRN 5592-70-1
CMF C14 H24 O2



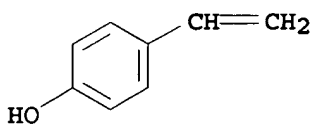
CM 2

CRN 3891-33-6
CMF C8 H14 O2



CM 3

CRN 2628-17-3
CMF C8 H8 O



RN 362479-07-0 HCAPLUS
CN Phenol, 4-ethenyl-, polymer with 1,4-bis(ethenyloxy)butane and 3-(2-propenyloxy)-2,2-bis[(2-propenyloxy)methyl]-1-propanol (9CI) (CA INDEX NAME)

CM 1

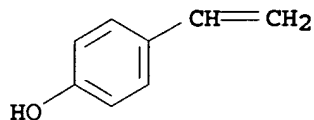
CRN 3891-33-6
CMF C8 H14 O2



CM 2

CRN 2628-17-3

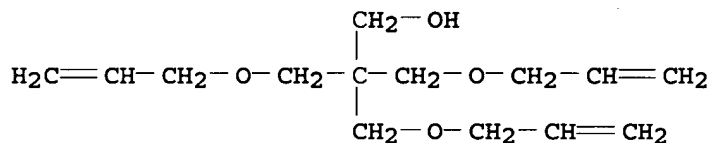
CMF C8 H8 O



CM 3

CRN 1471-17-6

CMF C14 H24 O4



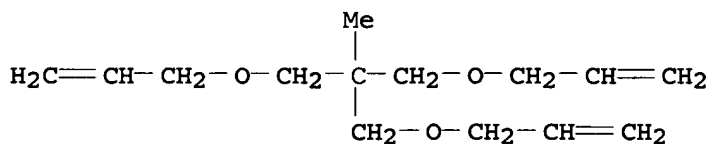
RN 362479-08-1 HCAPLUS

CN Phenol, 4-ethenyl-, polymer with 1,4-bis(ethenyloxy)butane and
3,3'-[[2-methyl-2-[(2-propenyloxy)methyl]-1,3-
propanediyl]bis(oxy)]bis[1-propene] (9CI) (CA INDEX NAME)

CM 1

CRN 56703-60-7

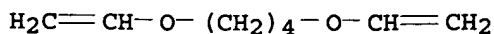
CMF C14 H24 O3



CM 2

CRN 3891-33-6

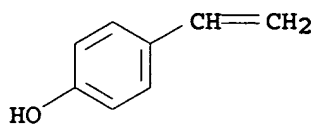
CMF C8 H14 O2



CM 3

CRN 2628-17-3

CMF C8 H8 O



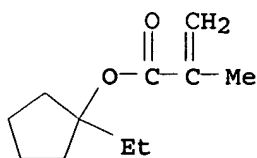
RN 362479-12-7 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, 1-ethylcyclopentyl ester, polymer
with 1,4-bis(ethenyloxy)butane, 1-ethenyl-4-(1-ethoxyethoxy)benzene, 4-ethenylphenol and 3-(2-propenyloxy)-2,2-bis[(2-propenyloxy)methyl]-1-propanol (9CI) (CA INDEX NAME)

CM 1

CRN 266308-58-1

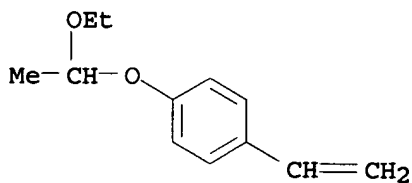
CMF C11 H18 O2



CM 2

CRN 157057-20-0

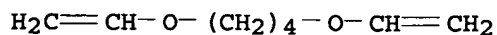
CMF C12 H16 O2



CM 3

CRN 3891-33-6

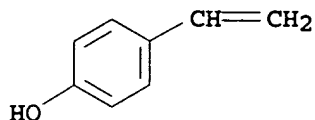
CMF C8 H14 O2



CM 4

CRN 2628-17-3

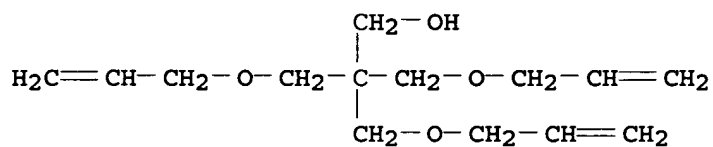
CMF C8 H8 O



CM 5

CRN 1471-17-6

CMF C14 H24 O4



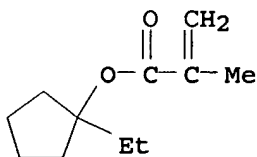
RN 362479-12-7 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, 1-ethylcyclopentyl ester, polymer
with 1,4-bis(ethenyloxy)butane, 1-ethenyl-4-(1-ethoxyethoxy)benzene, 4-ethenylphenol and 3-(2-propenyloxy)-2,2-bis[(2-propenyloxy)methyl]-1-propanol (9CI) (CA INDEX NAME)

CM 1

CRN 266308-58-1

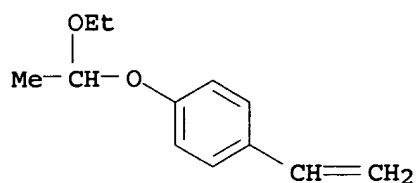
CMF C11 H18 O2



CM 2

CRN 157057-20-0

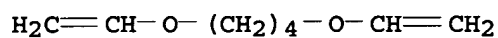
CMF C12 H16 O2



CM 3

CRN 3891-33-6

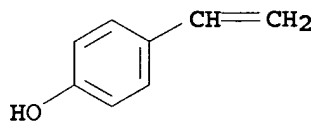
CMF C8 H14 O2



CM 4

CRN 2628-17-3

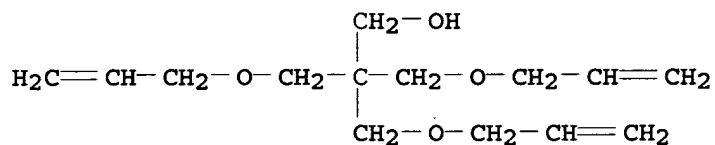
CMF C8 H8 O



CM 5

CRN 1471-17-6

CMF C14 H24 O4



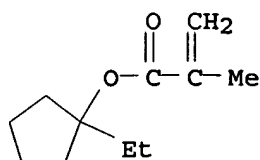
RN 362479-15-0 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, 1-ethylcyclopentyl ester, polymer with 1,4-bis(ethenyloxy)butane, 4-ethenylphenol and 3,3'-[[2-methyl-2-[(2-propenyloxy)methyl]-1,3-propanediyl]bis(oxy)]bis[1-propene] (9CI) (CA INDEX NAME)

CM 1

CRN 266308-58-1

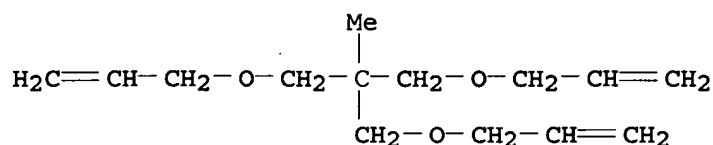
CMF C11 H18 O2



CM 2

CRN 56703-60-7

CMF C14 H24 O3



CM 3

CRN 3891-33-6

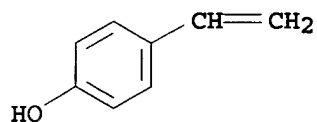
CMF C8 H14 O2



CM 4

CRN 2628-17-3

CMF C8 H8 O



IC ICM G03F007-004

ICS G03F007-039; G03F007-027

CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)

Section cross-reference(s): 35, 38, 76

IT 3235-51-6, Tris(2-methoxyethyl)amine 24979-70-2D,
 Poly(p-hydroxystyrene), ethoxyethyl ether and/or t-Bu carbonate
 and/or ethoxypropyl ether and/or t-butoxycarbonyl Me derivs.
 194996-88-8 326925-52-4 326925-68-2, 1-Ethylcyclopentyl
 methacrylate-p-hydroxystyrene copolymer 326925-71-7
 338438-44-1 338438-45-2 362478-92-0D, ethoxyethyl
 ether and/or t-Bu carbonate and/or ethoxypropyl ether and/or
 t-butoxycarbonyl Me derivs. 362478-93-1D, ethoxyethyl ether
 and/or t-Bu carbonate and/or ethoxypropyl ether and/or

t-butoxycarbonyl Me derivs. 362478-94-2D, ethoxyethyl ether
 and/or t-Bu carbonate and/or ethoxypropyl ether and/or
 t-butoxycarbonyl Me derivs. 362478-95-3D, ethoxyethyl ether
 and/or t-Bu carbonate and/or ethoxypropyl ether and/or
 t-butoxycarbonyl Me derivs. 362478-97-5D, ethoxyethyl ether
 and/or t-Bu carbonate and/or ethoxypropyl ether and/or
 t-butoxycarbonyl Me derivs. 362478-98-6 362478-99-7
 362479-00-3D, ethoxypropyl ether or ethoxyethyl ether
 362479-01-4 362479-02-5 362479-03-6 362479-04-7D,
 ethoxypropyl ether or ethoxyethyl ether 362479-05-8D,
 ethoxypropyl ether or ethoxyethyl ether 362479-06-9D,
 ethoxypropyl ether or ethoxyethyl ether 362479-07-0D,
 ethoxypropyl ether or ethoxyethyl ether 362479-08-1D,
 ethoxypropyl ether or ethoxyethyl ether 362479-09-2
 362479-10-5 362479-11-6 362479-12-7
 362479-12-7D, ethoxyethyl ether and/or t-Bu carbonate
 and/or ethoxypropyl ether and/or t-butoxycarbonyl Me derivs.
 362479-14-9 362479-15-0 362479-16-1

(chemical amplified pos. resist composition containing)

REFERENCE COUNT: 6 THERE ARE 6 CITED REFERENCES AVAILABLE
 FOR THIS RECORD. ALL CITATIONS AVAILABLE
 IN THE RE FORMAT

L66 ANSWER 19 OF 29 HCAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 2001:615616 HCAPLUS

DOCUMENT NUMBER: 135:172999

TITLE: Positive photoresists containing crosslinked
 polymers

INVENTOR(S): Adams, Timothy G.; Rajaratnam, Martha M.;
 Pandya, Ashish A.; Sinta, Roger F.; Varanasi,
 Pushkara R.; Cornett, Kathleen; Katnani, Ahmad
 D.

PATENT ASSIGNEE(S): Shipley Company Llc, USA

SOURCE: Eur. Pat. Appl., 12 pp.

CODEN: EPXXDW

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 1126321	A1	20010822	EP 2001-301054	2001 0206
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO				
US 2002012869	A1	20020131	US 2001-780989	2001 0209
JP 2002020639	A2	20020123	JP 2001-35110	2001 0213
PRIORITY APPLN. INFO.:				2000 0210
US 2000-181585P				P

AB The invention provides novel cross-linked polymers and pos.
 chemical-amplified photoresist compns. that comprise a photoactive

component and such cross-linked polymers. Resists of the invention can exhibit enhanced lithog. results relative to comparable compns. where the polymers are not crosslinked.

IT 354159-80-1P 354159-81-2P

(1,4-cyclohexanedimethanol divinyl ether crosslinked;
crosslinked polymers in pos. photoresists)

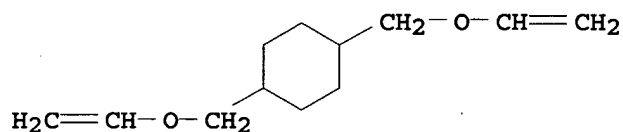
RN 354159-80-1 HCAPLUS

CN 2-Propenoic acid, 1,1-dimethylethyl ester, polymer with
1,4-bis[(ethenyloxy)methyl]cyclohexane, ethenylbenzene and
4-ethenylphenol (9CI) (CA INDEX NAME)

CM 1

CRN 17351-75-6

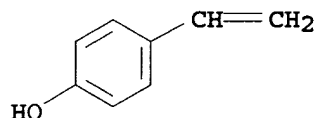
CMF C12 H20 O2



CM 2

CRN 2628-17-3

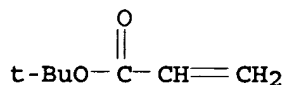
CMF C8 H8 O



CM 3

CRN 1663-39-4

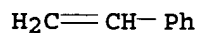
CMF C7 H12 O2



CM 4

CRN 100-42-5

CMF C8 H8



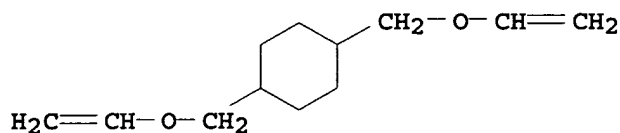
RN 354159-81-2 HCAPLUS

CN 2-Propenoic acid, 1,1-dimethylethyl ester, polymer with
1,4-bis[(ethenyloxy)methyl]cyclohexane and 4-ethenylphenol (9CI)
(CA INDEX NAME)

CM 1

CRN 17351-75-6

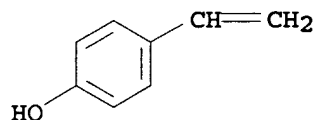
CMF C12 H20 O2



CM 2

CRN 2628-17-3

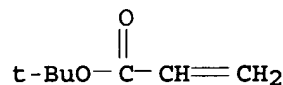
CMF C8 H8 O



CM 3

CRN 1663-39-4

CMF C7 H12 O2



IC ICM G03F007-039

ICS G03F007-004; C08F212-14; C08F008-00

CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and
Other Reprographic Processes)

Section cross-reference(s): 38

IT 354159-80-1P 354159-81-2P

(1,4-cyclohexanedimethanol divinyl ether crosslinked;
crosslinked polymers in pos. photoresists)

REFERENCE COUNT: 7 THERE ARE 7 CITED REFERENCES AVAILABLE
FOR THIS RECORD. ALL CITATIONS AVAILABLE
IN THE RE FORMAT

L66 ANSWER 20 OF 29 HCAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 2001:469366 HCAPLUS

DOCUMENT NUMBER: 135:68557

TITLE: Photolithography and its chemically-amplified
photoresists containing specific
sulfonyldiazomethane compounds

INVENTOR(S): Seki, Akihiro; Takemura, Katsuya; Osawa,
Yoichi; Watanabe, Atsushi; Nagura, Shigehiro
PATENT ASSIGNEE(S): Shin-Etsu Chemical Industry Co., Ltd., Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 49 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2001174984	A2	20010629	JP 2000-294695	2000 0927
JP 3750725	B2	20060301		
US 6395446	B1	20020528	US 2000-680481	2000 1005

PRIORITY APPLN. INFO.: JP 1999-285450 A
1999
1006

OTHER SOURCE(S): MARPAT 135:68557

AB The photoresists contain (i) $[C_6H_5-p-q(R_1CO_2)qR_2pSO_2]nC:N_2(GR_3)m$ ($R_1, R_3 = C_1-10$ alkyl, C_6-14 aryl; $R_2 = C_1-6$ alkyl; $G = SO_2, CO$; $p = 0-4$ integer; $q = 1-5$ integer; $1 \leq p + q \leq 5$; $n = 1, 2$; $m = 0, 1$; $m + n = 2$) or (ii) $R_1CO_2-p-C_6H_4SO_2C:N_2SO_2-p-C_6H_4OCOR_1$ ($R_1 =$ the same definition as above) as photoacid generators. The photoresists may comprise (α -methyl-)p-hydroxystyrene-(meth)acrylate ester copolymers with Mw 3,000-100,000 containing ≤ 80 ($\neq 0$)-mol% acid-labile substituents. Markush structures for preferable acid-labile substituents are given. Photolithog. employing the photoresists and ≤ 300 -nm high-energy beam or electron beam is also claimed. The photoresists show excellent post-development profiles.

IT 326925-73-9 346428-50-0

(chemical-amplified pos. photoresists containing alkali-solubility-improved sp. sulfonylazomethanes for far-UV photolithog.)

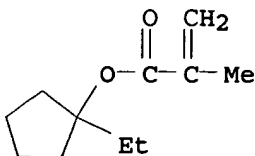
RN 326925-73-9 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, 1-ethylcyclopentyl ester, polymer with 1,2-bis(ethenyloxy)propane, 1,1-dimethylethyl 4-ethenylphenyl carbonate and 4-ethenylphenol (9CI) (CA INDEX NAME)

CM 1

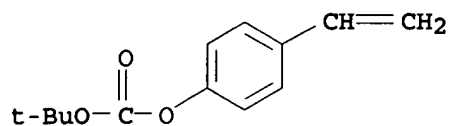
CRN 266308-58-1

CMF C11 H18 O2



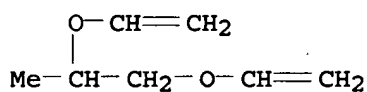
CM 2

CRN 87188-51-0
 CMF C13 H16 O3



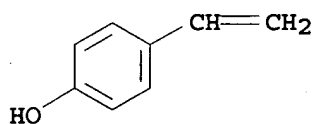
CM 3

CRN 71545-61-4
 CMF C7 H12 O2



CM 4

CRN 2628-17-3
 CMF C8 H8 O

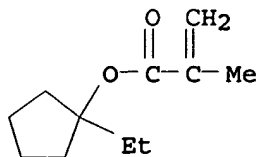


RN 346428-50-0 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, 1-ethylcyclopentyl ester, polymer
 with 1,2-bis(ethenyloxy)propane, ethenylbenzene and
 4-ethenylphenol (9CI) (CA INDEX NAME)

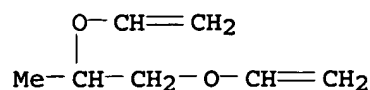
CM 1

CRN 266308-58-1
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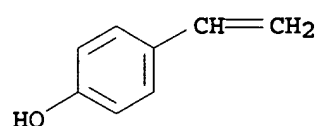
CM 2

CRN 71545-61-4
CMF C7 H12 O2



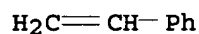
CM 3

CRN 2628-17-3
CMF C8 H8 O



CM 4

CRN 100-42-5
CMF C8 H8



IC ICM G03F007-004
ICS C07C381-14; C08K005-09; C08K005-13; C08K005-16; C08K005-41;
C08K005-43; C08L025-02; C08L025-18; C08L033-02; C08L033-04;
C08L035-00; G03F007-039; G03F007-26
CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and
Other Reprographic Processes)
Section cross-reference(s): 25, 37
IT 2628-17-3D, p-Hydroxystyrene, ethoxyethyl ether, 1,2-propanediol
divinyl ether copolymer 2628-17-3D, p-Hydroxystyrene,
ethoxyethyl ether, tert-butoxycarbonic ester, 1,2-propanediol
divinyl ether copolymer 59269-51-1D, Polyhydroxystyrene,
ethoxyethyl ether 155214-68-9D, ethoxyethyl ether 189257-17-8,
Poly(hydroxystyrene) acetate 326925-68-2 326925-73-9
345580-95-2 346428-50-0 346428-52-2
(chemical-amplified pos. photoresists containing alkali-solubility-improved
sp. sulfonylazomethanes for far-UV photolithog.)

L66 ANSWER 21 OF 29 HCAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 2001:356328 HCAPLUS

DOCUMENT NUMBER: 134:346477

TITLE: Chemically amplified positive resist
composition and patterning method

INVENTOR(S): Takemura, Katsuya; Koizumi, Kenji; Kaneko,
Tatsushi; Sakurada, Toyohisa

PATENT ASSIGNEE(S): Shin-Etsu Chemical Co., Ltd., Japan

SOURCE: Eur. Pat. Appl., 53 pp.

CODEN: EPXXDW

DOCUMENT TYPE: Patent

LANGUAGE: English
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

PATENT NO. -----	KIND ----	DATE -----	APPLICATION NO. -----	DATE
EP 1099983	A1	20010516	EP 2000-310001	2000 1110
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO				
JP 2001142199	A2	20010525	JP 1999-323332	1999 1112
TW 520467	B	20030211	TW 2000-89123870	2000 1110
US 6511785	B1	20030128	US 2000-709629	2000 1113
PRIORITY APPLN. INFO.:			JP 1999-323332	A 1999 1112

AB The invention relates to a chemical-amplified pos. resist composition for forming a contact hole pattern by the thermal flow process. A method for forming a contact hole pattern using a chemical-amplified pos. resist composition comprising a polymer as the base resin involves the thermal flow step of heat treating the contact hole pattern for further reducing the size of contact holes. A chemical-amplified pos. resist composition comprising a base resin and a compound containing two to six functional groups, specifically alkenyloxy, acetal and ortho-ester groups in the mol. is suitable for forming a contact hole pattern by the thermal flow process. The invention also relates to a method for forming a microsize contact hole pattern in the manufacture of VLSI.

IT 338438-45-2

(chemical-amplified pos. resist composition comprising base resin and suitable for forming contact-hole pattern by thermal flow in VLSI manufacturing and containing)

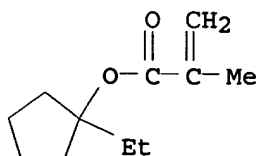
RN 338438-45-2 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, 1-ethylcyclopentyl ester, polymer with 1,4-bis(ethenyloxy)butane, 1-ethenyl-4-(1-ethoxyethoxy)benzene and 4-ethenylphenol (9CI) (CA INDEX NAME)

CM 1

CRN 266308-58-1

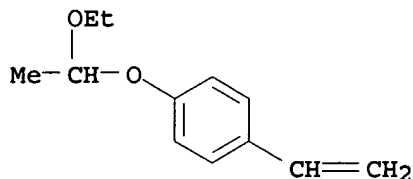
CMF C11 H18 O2



CM 2

CRN 157057-20-0

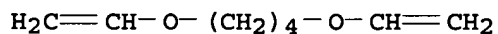
CMF C12 H16 O2



CM 3

CRN 3891-33-6

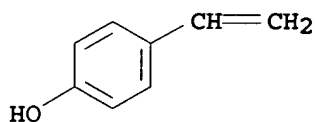
CMF C8 H14 O2



CM 4

CRN 2628-17-3

CMF C8 H8 O



IC ICM G03F007-039

ICS G03F007-004

CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)

IT 24979-70-2D, acetals and esters 147625-42-1D, acetals

150746-92-2 326925-68-2 326925-71-7 338438-44-1

338438-45-2

(chemical-amplified pos. resist composition comprising base resin and suitable for forming contact-hole pattern by thermal flow in VLSI manufacturing and containing)

REFERENCE COUNT:

5

THERE ARE 5 CITED REFERENCES AVAILABLE
FOR THIS RECORD. ALL CITATIONS AVAILABLE
IN THE RE FORMAT

L66 ANSWER 22 OF 29 HCAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 2001:133716 HCAPLUS

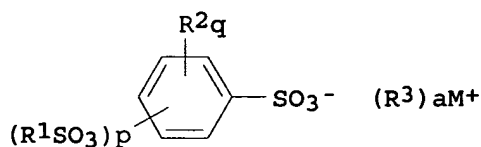
DOCUMENT NUMBER: 134:200517

TITLE: Novel onium salts as photoacid generators for resist compositions and patterning process

INVENTOR(S): Ohsawa, Youichi; Watanabe, Jun; Kusaki, Wataru; Watanabe, Satoshi; Nagata, Takeshi;

PATENT ASSIGNEE(S): Nagura, Shigehiro
 SOURCE: Shin-Etsu Chemical Co., Ltd., Japan
 Eur. Pat. Appl., 77 pp.
 CODEN: EPXXDW
 DOCUMENT TYPE: Patent
 LANGUAGE: English
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 1077391	A1	20010221	EP 2000-306997	2000 0816
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO				
JP 2001122850	A2	20010508	JP 2000-245564	2000 0814
US 6440634	B1	20020827	US 2000-637363	2000 0815
TW 536549	B	20030611	TW 2000-89116464	2000 0815
PRIORITY APPLN. INFO.:			JP 1999-230122	A 1999 0816
			JP 1999-230126	A 1999 0816
OTHER SOURCE(S):			MARPAT 134:200517	
GI				



AB Disclosed is a chemical amplification type resist composition that comprises as a photoacid generator novel onium salts of the formula I (R1 = C1-10 alkyl, C6-14 aryl; R2 = H, C1-6 alkyl; p = 1-5, q = 0-4, p+q = 5; R3 = C1-10 alkyl, C6-14 aryl; M = S, I; a = 3 when M=S, 2 when M=I). The chemical amplification type resist comprising the onium salt as a photoacid generator is suited for microfabrication, especially by deep UV lithog. and has many advantages including improved resolution, minimized line width variation or shape degradation even on long-term post-exposure delay, minimized defect after coating, development and stripping, and improved pattern profile after development.

IT 326925-72-8 326925-73-9

(photoacid generators for photoresist compns. based on sulfonium and iodonium salts and polymers which change their

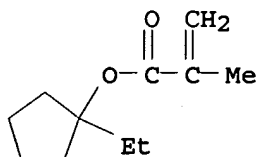
solubility in alkaline developer by acid action)

RN 326925-72-8 HCAPLUS
 CN 2-Propenoic acid, 2-methyl-, 1-ethylcyclopentyl ester, polymer
 with 1,2-bis(ethenyloxy)propane and 4-ethenylphenol (9CI) (CA
 INDEX NAME)

CM 1

CRN 266308-58-1

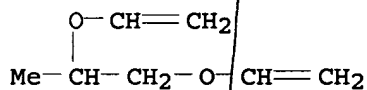
CMF C11 H18 O2



CM 2

CRN 71545-61-4

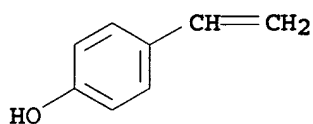
CMF C7 H12 O2



CM 3

CRN 2623-17-3

CMF C8 H8 O

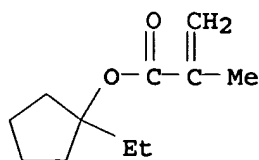


RN 326925-73-9 HCAPLUS
 CN 2-Propenoic acid, 2-methyl-, 1-ethylcyclopentyl ester, polymer
 with 1,2-bis(ethenyloxy)propane, 1,1-dimethylethyl 4-ethenylphenyl
 carbonate and 4-ethenylphenol (9CI) (CA INDEX NAME)

CM 1

CRN 266308-58-1

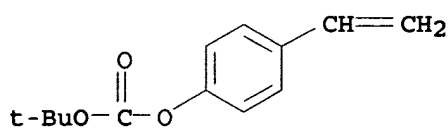
CMF C11 H18 O2



CM 2

CRN 87188-51-0

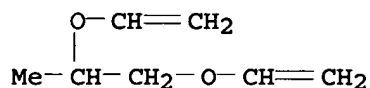
CMF C13 H16 O3



CM 3

CRN 71545-61-4

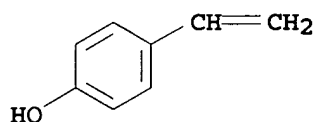
CMF C7 H12 O2



CM 4

CRN 2628-17-3

CMF C8 H8 O



IC ICM G03F007-004

ICS G03F007-039; C07C381-12; C07C309-73; C07C309-71

CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)

Section cross-reference(s): 76

IT 24979-70-2D, Poly(p-hydroxystyrene), ethoxyethyl ether, tert-butoxycarbonate and acetate derivs. 71545-61-4D, reaction products with poly(p-hydroxystyrene) containing ether and ester groups 326925-68-2, p-Hydroxystyrene-1-ethylcyclopentyl methacrylate copolymer 326925-70-6 326925-71-7 326925-72-8 326925-73-9

(photoacid generators for photoresist compns. based on sulfonium and iodonium salts and polymers which change their

solubility in alkaline developer by acid action)
 REFERENCE COUNT: 2 THERE ARE 2 CITED REFERENCES AVAILABLE
 FOR THIS RECORD. ALL CITATIONS AVAILABLE
 IN THE RE FORMAT

L66 ANSWER 23 OF 29 HCAPLUS COPYRIGHT 2006 ACS on STN
 ACCESSION NUMBER: 2000:837042 HCAPLUS
 DOCUMENT NUMBER: 134:35025
 TITLE: Chemically amplified resist composition
 containing acid-sensitive resin
 INVENTOR(S): Yamana, Shinji
 PATENT ASSIGNEE(S): NEC Corp., Japan
 SOURCE: Jpn. Kokai Tokkyo Koho, 14 pp.
 CODEN: JKXXAF
 DOCUMENT TYPE: Patent
 LANGUAGE: Japanese
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2000330285	A2	20001130	JP 1999-140249	1999 0520
JP 3285086	B2	20020527		
US 6342334	B1	20020129	US 2000-573009	2000 0518
US 2002058203	A1	20020516	US 2001-988682	2001 1120
US 6406831	B2	20020618		
PRIORITY APPLN. INFO.:			JP 1999-140249	A 1999 0520
			US 2000-573009	A3 2000 0518

AB The composition contains a photoacid generator and an acid sensitive resin having a protected carboxy group, wherein the acid generated from the photoacid generator has sulfonyl group and a carboxy group. The composition provides the fine pattern with the excellent pattern profiles.

IT 310882-98-5

(acid-sensitive resin in chemical amplified resist composition)

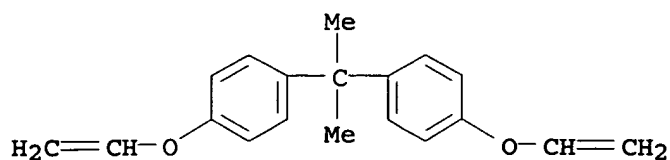
RN 310882-98-5 HCAPLUS

CN Phenol, 4-ethenyl-, polymer with 1,1'-(1-methylethylidene)bis[4-(ethenyloxy)benzene] (9CI) (CA INDEX NAME)

CM 1

CRN 3754-60-7

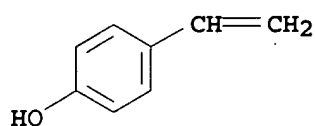
CMF C19 H20 O2



CM 2

CRN 2628-17-3

CMF C8 H8 O



IC ICM G03F007-039

ICS G03F007-004; H01L021-027

CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)

Section cross-reference(s): 35

IT 158401-89-9 195458-41-4 310882-98-5 310884-69-6

(acid-sensitive resin in chemical amplified resist composition)

L66 ANSWER 24 OF 29 HCAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 2000:143365 HCAPLUS

DOCUMENT NUMBER: 132:187654

TITLE: Radiation-sensitive resist composition

INVENTOR(S): Kobayashi, Eiichi; Ikemura, Toshiaki; Nishimura, Yukio; Iwanaga, Shinichiro

PATENT ASSIGNEE(S): JSR Co., Ltd., Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 22 pp.

CODEN: JKXXAF

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

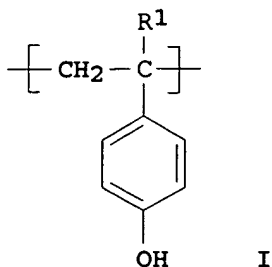
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2000066404	A2	20000303	JP 1998-258876	1998 0911

PRIORITY APPLN. INFO.:

JP 1998-164700 A

1998 0612

GI



AB The radiation-sensitive resist composition contains a radiation-sensitive acid generator and a resin of structure repeating unit I (R1 = H, methyl) and (-CH2-C(R2)(-COOC(CH3)(CH3)-CH2-COCH3)-) (R2 = Me, H). The resist composition shows the excellent sensitivity towards far-UV light and provides the superior resolution

IT 259214-34-1DP, 1-ethoxyethyl ether
(radiation-sensitive resist composition)

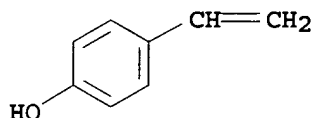
RN 259214-34-1 HCAPLUS

CN Phenol, 4-ethenyl-, polymer with ethoxyethene and 1,1'-[oxybis(2,1-ethanediylloxy)]bis[ethene] (9CI) (CA INDEX NAME)

CM 1

CRN 2628-17-3

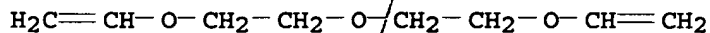
CMF C8 H8 O



CM 2

CRN 764-99-8

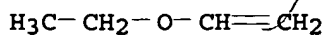
CMF C8 H14 O3



CM 3

CRN 109-92-2

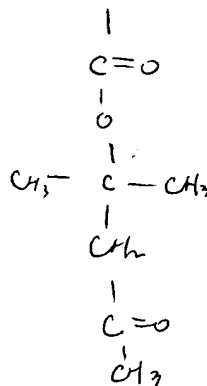
CMF C4 H8 O



IC ICM G03F007-039

ICS H01L021-027

CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and

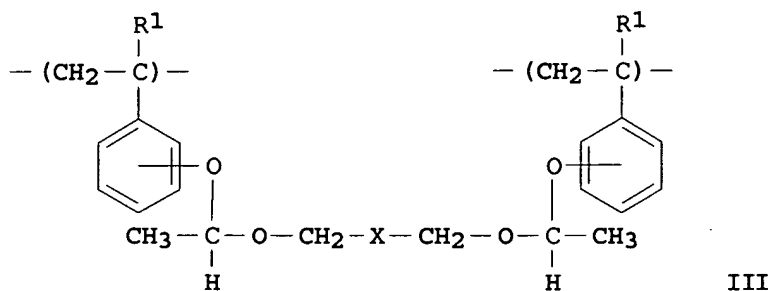
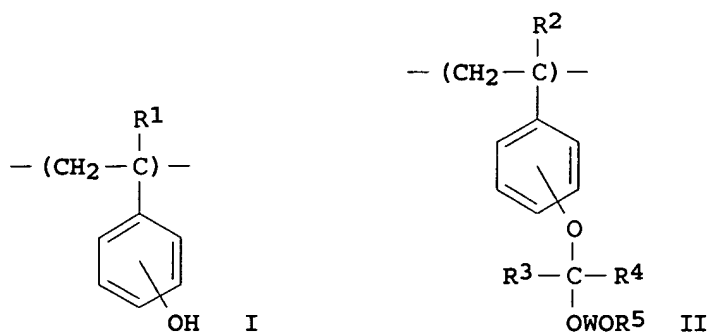


Other Reprographic Processes)
 IT 24979-70-2DP, ethoxyalkyl ethers 24979-74-6DP,
 1-(cyclohexyloxy)ethyl ether 147625-42-1DP, 1-ethoxyethyl ether
 159296-87-4DP, 1-ethoxyethyl ether 259196-63-9P 259196-64-0DP,
 1-ethoxyethyl ether 259196-64-0P 259196-65-1P 259196-66-2P
 259196-67-3P 259196-68-4P 259196-69-5DP, 1-ethoxypropyl ether
 259196-69-5DP, 1-ethoxypropyl ether 259214-34-1DP,
 1-ethoxyethyl ether
 (radiation sensitive resist composition)

L66 ANSWER 25 OF 29 HCAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 2000:143361 HCAPLUS
 DOCUMENT NUMBER: 132:187652
 TITLE: Positive-working photoresist composition
 INVENTOR(S): Fujinomori, Akira; Tan, Shiro
 PATENT ASSIGNEE(S): Fuji Photo Film Co., Ltd., Japan
 SOURCE: Jpn. Kokai Tokkyo Koho, 41 pp.
 CODEN: JKXXAF
 DOCUMENT TYPE: Patent
 LANGUAGE: Japanese
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2000066400	A2	20000303	JP 1998-234339	1998 0820
PRIORITY APPLN. INFO.:			JP 1998-234339	1998 0820
OTHER SOURCE(S):			MARPAT 132:187652	
GI				



AB The pos.-working photoresist composition comprises a copolymer having structural units of I-III ($R_{1,2}$ = H, C1-3 alkyl; $R_{3,4}$ = H, C1-4 alkyl; R_5 = C11-20 alkyl; X, W = divalent organic group), a photoacid, and a solvent. This photoresist composition showed excellent dry-etching resistance.

IT 259655-55-5P 259655-56-6P 259655-57-7P
259655-58-8P 259655-59-9P 259655-60-2P
259655-61-3P

(pos.-working photoresist composition containing)

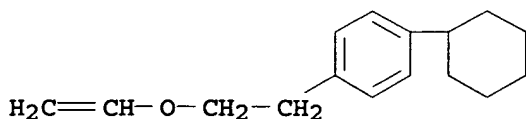
RN 259655-55-5 HCAPLUS

CN Phenol, 4-ethenyl-, polymer with 1,4-bis[(ethenyloxy)methyl]cyclohexane and 1-cyclohexyl-4-[2-(ethenyloxy)ethyl]benzene (9CI) (CA INDEX NAME)

CM 1

CRN 259655-54-4

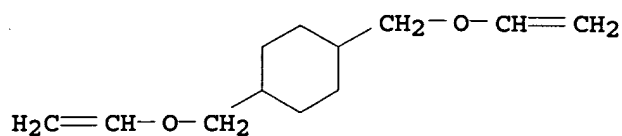
CMF C16 H22 O



CM 2

CRN 17351-75-6

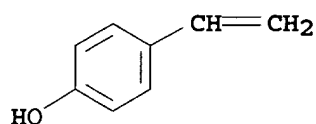
CMF C12 H20 O2



CM 3

CRN 2628-17-3

CMF C8 H8 O



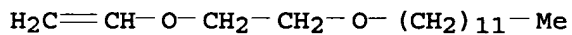
RN 259655-56-6 HCAPLUS

CN Phenol, 4-ethenyl-, polymer with 1,4-bis((ethenyloxy)methyl)benzene and 1-[2-(ethenyloxy)ethoxy]dodecane (9CI) (CA INDEX NAME)

CM 1

CRN 249562-86-5

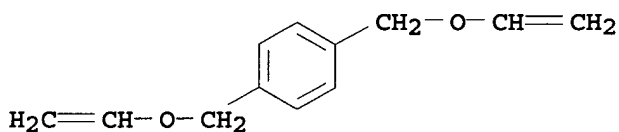
CMF C16 H32 O2



CM 2

CRN 193687-66-0

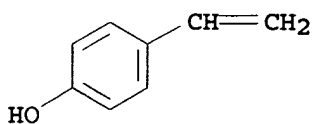
CMF C12 H14 O2



CM 3

CRN 2628-17-3

CMF C8 H8 O

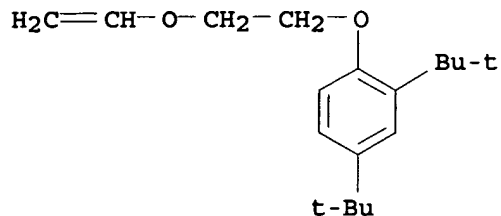


RN 259655-57-7 HCAPLUS
 CN Phenol, 4-ethenyl-, polymer with 2,4-bis(1,1-dimethylethyl)-1-[2-(ethenyloxy)ethoxy]benzene and 1,4-bis[(ethenyloxy)methyl]cyclohexane (9CI) (CA INDEX NAME)

CM 1

CRN 249562-82-1

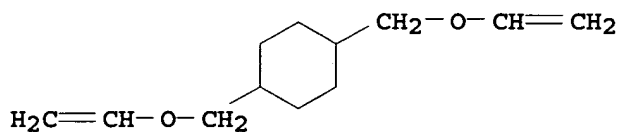
CMF C18 H28 O2



CM 2

CRN 17351-75-6

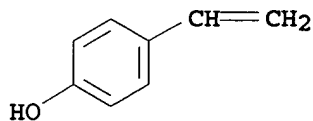
CMF C12 H20 O2



CM 3

CRN 2628-17-3

CMF C8 H8 O

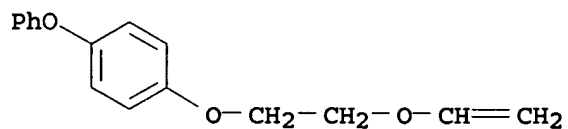


RN 259655-58-8 HCAPLUS
 CN Phenol, 4-ethenyl-, polymer with 1,4-bis[(ethenyloxy)methyl]cyclohexane and 1-[2-(ethenyloxy)ethoxy]-4-phenoxybenzene (9CI) (CA INDEX NAME)

CM 1

CRN 57650-77-8

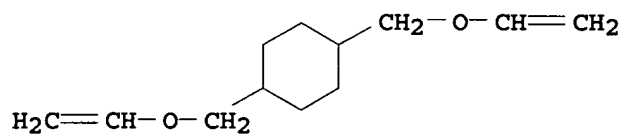
CMF C16 H16 O3



CM 2

CRN 17351-75-6

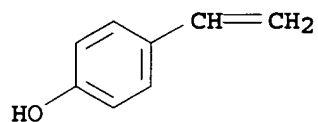
CMF C12 H20 O2



CM 3

CRN 2628-17-3

CMF C8 H8 O



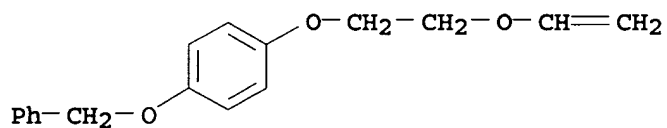
RN 259655-59-9 HCAPLUS

CN Phenol, 4-ethenyl-, polymer with 1,4-bis[(ethenyloxy)methyl]cyclohexane and 1-[2-(ethenyloxy)ethoxy]-4-(phenylmethoxy)benzene (9CI)
(CA INDEX NAME)

CM 1

CRN 249562-84-3

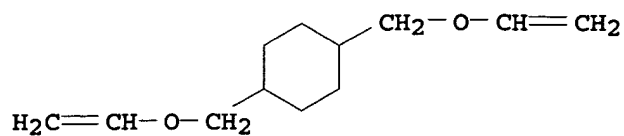
CMF C17 H18 O3



CM 2

CRN 17351-75-6

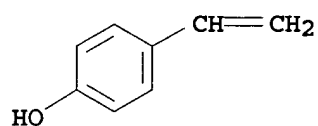
CMF C12 H20 O2



CM 3

CRN 2628-17-3

CMF C8 H8 O



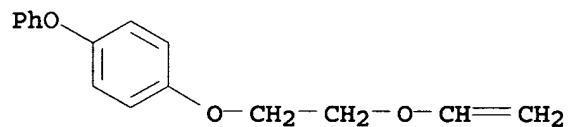
RN 259655-60-2 HCAPLUS

CN Phenol, 4-ethenyl-, polymer with 1,4-bis(ethenyloxy)butane and 1-[2-(ethenyloxy)ethoxy]-4-phenoxybenzene (9CI) (CA INDEX NAME)

CM 1

CRN 57650-77-8

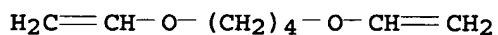
CMF C16 H16 O3



CM 2

CRN 3891-33-6

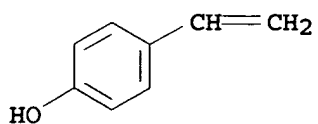
CMF C8 H14 O2



CM 3

CRN 2628-17-3

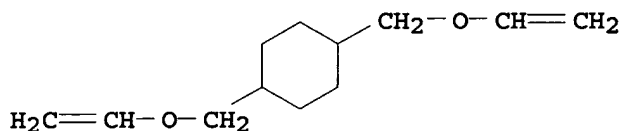
CMF C8 H8 O



RN 259655-61-3 HCAPLUS
 CN Phenol, 4-ethenyl-, polymer with 1,4-bis[(ethenyloxy)methyl]cyclohexane and ethoxyethene (9CI) (CA INDEX NAME)

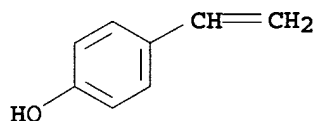
CM 1

CRN 17351-75-6
 CMF C12 H20 O2



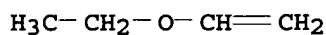
CM 2

CRN 2628-17-3
 CMF C8 H8 O



CM 3

CRN 109-92-2
 CMF C4 H8 O



IC ICM G03F007-039
 ICS H01L021-027
 CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)
 Section cross-reference(s): 35, 76
 IT 259655-55-5P 259655-56-6P 259655-57-7P
 259655-58-8P 259655-59-9P 259655-60-2P
 259655-61-3P
 (pos.-working photoresist composition containing)

L66 ANSWER 26 OF 29 HCAPLUS COPYRIGHT 2006 ACS on STN
 ACCESSION NUMBER: 2000:117258 HCAPLUS
 DOCUMENT NUMBER: 132:173395
 TITLE: Radiation-sensitive composition for chemically amplified photoresist
 INVENTOR(S): Pawlowski, Georg; Okazaki, Hiroshi; Kinoshita, Yoshiaki; Tsugama, Naoko; Hishida, Aritaka; Ma, Xiao-ming; Yamaguchi, Yuko
 PATENT ASSIGNEE(S): Clariant International Ltd., Switz.

SOURCE: PCT Int. Appl., 133 pp.
 CODEN: PIXXD2
 DOCUMENT TYPE: Patent
 LANGUAGE: Japanese
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2000008525	A1	20000217	WO 1999-JP4304	1999 0809
W: CN, JP, KR, SG, US RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				
EP 1033624	A1	20000906	EP 1999-935116	1999 0809
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI				
US 6358665	B1	20020319	US 2000-529371	2000 0703
PRIORITY APPLN. INFO.:				
			JP 1998-225029	A 1998 0807
			JP 1999-87036	A 1999 0329
			WO 1999-JP4304	W 1999 0809

AB A chemical amplification-type radiation-sensitive composition comprising a film-forming resin based on a hydroxystyrene in combination with an onium salt precursor capable of generating a fluorinated alkanesulfonic acid as a radiation-sensitive acid-generating agent. This composition is free from the occurrence of corrosion of an apparatus owing to outgassing, the formation of a T-type pattern and the change of line width caused by a delay of processing time, and can be used for achieving a high sensitivity and resolving power and a good and stable pattern formation.

IT 258871-97-5P, 4-Hydroxystyrene-4-tetrahydropyranyloxystyrene- α,ω -triethyleneglycol divinyl ether copolymer
 (radiation-sensitive composition for chemical amplified photoresist)

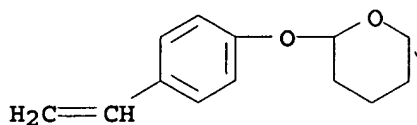
RN 258871-97-5 HCAPLUS

CN Phenol, 4-ethenyl-, polymer with 2-(4-ethenylphenoxy)tetrahydro-2H-pyran and 3,6,9,12-tetraoxatetradeca-1,13-diene (9CI) (CA INDEX NAME)

CM 1

CRN 65409-15-6

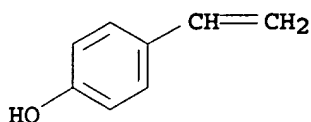
CMF C13 H16 O2



CM 2

CRN 2628-17-3

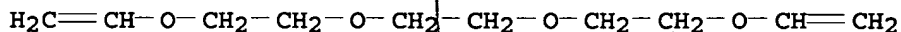
CMF C8 H8 O



CM 3

CRN 765-12-8

CMF C10 H18 O4



IC ICM G03F007-004

ICS G03F007-039; G03F007-038; C07C381-12; C07C309-06

CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)

IT 76-05-1P, preparation 108-90-7P, Chlorobenzene, preparation
 109-92-2DP, Ethylvinyl ether, reaction product with functionalized
 styrene polymer 110-75-8DP, 2-Chloroethylvinyl ether, reaction
 product with 4-hydroxystyrene homopolymer 536-80-1P,
 Iodosylbenzene 827-52-1P, Cyclohexylbenzene 2628-17-3P
 5292-43-3DP, tert-Butylbromoacetate, reaction product with
 hydrolyzed 4-tert-Bu polymer 7758-05-6P, Potassium iodate
 12124-97-9P, Ammonium bromide 18995-35-2P 24979-70-2DP,
 4-Hydroxystyrene homopolymer, reaction product with functionalized
 vinyl compound 34619-03-9DP, Di-tert-butylcarbonate, reaction
 product with 4-hydroxystyrene homopolymer 68734-62-3P,
 Trimethylsilylnonafluorobutanesulfonate 94287-61-3P
 129361-29-1P 130100-38-8P 133685-94-6P 135648-85-0P,
 4-Hydroxystyrene-4-methoxystyrene copolymer 144317-44-2P,
 Triphenylsulfonium nonafluorobutanesulfonate 155040-27-0P,
 4-Hydroxystyrene-tert-butyl methacrylate copolymer 158401-89-9P
 174476-25-6DP, 4-Acetoxystyrene-4-tert-butyl acrylate copolymer,
 hydrolyzed, reaction products with Et vinyl ether 175610-67-0P
 176747-00-5P, Diphenyliodonium 3,3,3,2,1,1-
 hexafluoropropanesulfonate 204065-67-8DP, 4-Hydroxystyrene-4-
 methylstyrene copolymer, reaction product with ethoxy vinyl ether
 241806-75-7P, Tris(4-tert-butylphenyl)sulfonium
 nonafluorobutanesulfonate 258871-76-0P, Tris(4-tert-
 butylphenyl)sulfonium 3,3,3,2,1,1-hexafluoropropanesulfonate
 258871-78-2P, Tri(4-t-butoxyphenyl)sulfonium 3,3,3,2,1,1-
 hexafluoropropanesulfonate 258871-81-7P, Tris(4-tert-

butoxycarbonylmethoxyphenyl)sulfonium 3,3,3,2,1,1-hexafluoropropanesulfonate 258871-83-9P, β -Oxocyclohexyl 2-norbornylmethyl sulfonium 3,3,3,2,1,1-hexafluoropropanesulfonate 258871-84-0P, Bis(4-cyclohexylphenyl)iodonium 3,3,3,2,1,1-hexafluoropropanesulfonate 258871-85-1P, 4-Methylphenylphenyliodonium 3,3,3,2,1,1-hexafluoropropanesulfonate 258871-86-2P, Bis(4-tert-butoxyphenyl)phenylsulfonium 3,3,3,2,1,1-hexafluoropropanesulfonate 258871-88-4P, Bis(4-methylphenyl)-4-cyclohexylphenylsulfonium 3,3,3,2,1,1-hexafluoropropanesulfonate 258871-89-5P, Tris(4-chlorophenyl)sulfonium 3,3,3,2,1,1-hexafluoropropanesulfonate 258871-90-8P, 4-Hydroxy-3,5-dimethylphenyldiphenylsulfonium 3,3,3,2,1,1-hexafluoropropanesulfonate 258871-91-9P, Di(4-tert-butyloxyphenyl)iodonium 3,3,3,2,1,1-hexafluoropropanesulfonate 258871-94-2P, Di(4-tert-butylcarbonyloxymethyloxyphenyl)iodonium 3,3,3,2,1,1-hexafluoropropanesulfonate 258871-95-3P, 4-tert-Butylphenylphenyliodonium 3,3,3,2,1,1-hexafluoropropanesulfonate 258871-97-5P, 4-Hydroxystyrene-4-tetrahydropyranyloxystyrene- α,ω -triethyleneglycol divinyl ether copolymer 258871-99-7P, Tris(tert-butylcarbonylmethyloxyphenyl)sulfonium 3,3,3,2,1,1-hexafluoropropanesulfonate 258872-01-4P, Bis(4-cyclohexylphenyl)phenylsulfonium 3,3,3,2,1,1-hexafluoropropanesulfonate 258872-02-5P, 4-Hydroxystyrene-4-tert-butyloxyphenylmethacrylate copolymer 258872-05-8P, Diphenyl 4-tert-butylphenylsulfonium nonafluorobutanesulfonate 258872-08-1P, Tris(4-butoxyphenyl)sulfonium nonafluorobutanesulfonate 258872-10-5P, Tris(4-tert-butoxycarbonylmethoxyphenyl)sulfonium nonafluorobutanesulfonate 258872-13-8P 258872-14-9P, Bis(4-cyclohexylphenyl)iodonium nonafluorobutylsulfonate 258872-15-0DP, 4-Acetoxystyrene-styrene-tert-butyl methacrylate copolymer, reaction products with hydroxystyrene polymer derivative 258873-04-0P, Bis(4-hydroxyphenyliodonium) 3,3,3,2,1,1-hexafluoropropanesulfonate (radiation-sensitive composition for chemical amplified photoresist)

REFERENCE COUNT: 10 THERE ARE 10 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L66 ANSWER 27 OF 29 HCAPLUS COPYRIGHT 2006 ACS on STN
 ACCESSION NUMBER: 1997:154674 HCAPLUS
 DOCUMENT NUMBER: 126:164302
 TITLE: Manufacture of waterless presensitized lithographic plate showing high sensitivity
 INVENTOR(S): Tsucha, Mitsumasa; Sato, Hironori; Kondo, Shunichi
 PATENT ASSIGNEE(S): Fuji Photo Film Co Ltd, Japan
 SOURCE: Jpn. Kokai Tokkyo Koho, 43 pp.
 CODEN: JKXXAF
 DOCUMENT TYPE: Patent
 LANGUAGE: Japanese
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 08328240	A2	19961213	JP 1995-132034	

1995
0530

PRIORITY APPLN. INFO.:

JP 1995-132034

1995
0530

AB The plate includes a photosensitive layer and a silicone rubber layer successively laminated on a support, where the photosensitive layer is prepared by applying a coating solution containing (A) a compound having ≥ 2 enol (thio)ethers of $R_1(R_2)C:C(R_3)O$ or $R_1(R_2)C:C(R_3)S$ ($R_1-3 = H$, alkyl, aryl), (B) a linear macromol. compound having an acid group and OH or SH, and (C) a photoacid generator decomposing with active-beam irradiation or radiation, and heating at $60-150^\circ$ for 30 s-10 min.

IT 160508-71-4P

(photosensitive layer; manufacture of waterless presensitized lithog. plate containing enol ether-crosslinked photoresist layer)

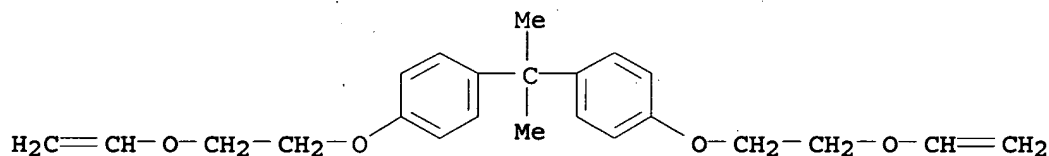
RN 160508-71-4 HCAPLUS

CN Phenol, 4-ethenyl-, polymer with ethenylmethylbenzene and 1,1'-(1-methylethylidene)bis[4-[2-(ethenyloxy)ethoxy]benzene] (9CI) (CA INDEX NAME)

CM 1

CRN 52411-04-8

CMF C23 H28 O4



CM 2

CRN 25013-15-4

CMF C9 H10

CCI IDS

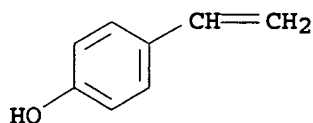


D1-Me

D1-CH=CH2

CM 3

CRN 2628-17-3
CMF C8 H8 O



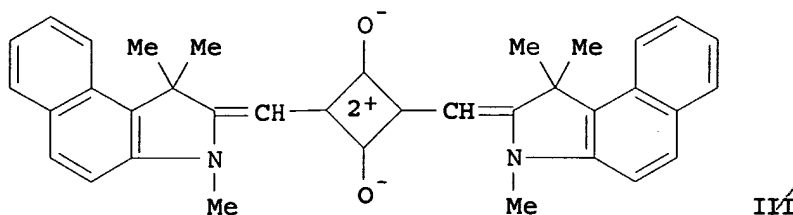
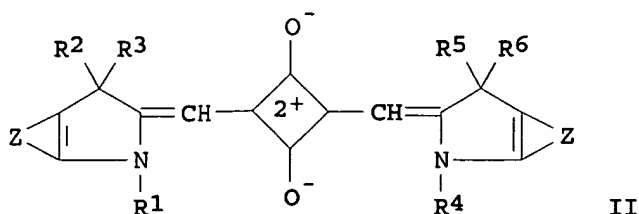
IC ICM G03F007-00
ICS G03F007-039
CC 74-6 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)
Section cross-reference(s): 38
IT 52411-04-8DP, polymers with polyvinyl butyrals, vinyl alc., and vinyl phthalate 160508-63-4P 160508-65-6P 160508-67-8P
160508-71-4P 186819-13-6P 186819-14-7P 186819-15-8P
186819-16-9P 186819-17-0P 186819-18-1P 186819-20-5P
(photosensitive layer; manufacture of waterless presensitized lithog. plate containing enol ether-crosslinked photoresist layer)

L66 ANSWER 28 OF 29 HCAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 1996:67471 HCAPLUS
DOCUMENT NUMBER: 124:216089
TITLE: Visible light-reactive resin composition and sheet-type optical recording material
INVENTOR(S): Hosoda, Yukio; Myata, Tadakazu
PATENT ASSIGNEE(S): Shinoji Seishi Kk, Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 123 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 07287393	A2	19951031	JP 1994-76911	1994 0415
PRIORITY APPLN. INFO.:				1994 0415

GI



AB The title resin composition contains (a) ≥ 1 selected from (co)polymers with weight average mol. weight (Mw) ≥ 4000 of p-vinylphenol, (b) ≥ 1 cation-reactive compound selected from vinyl ether and amide compds., (c) 2,4,6-tris(trichloromethyl)-1,3,5-triazine (I), and (d) a squarylium salt-type sensitizer II [R1-6 = saturated or unsatd. hydrocarbon group; Z = hydrocarbon group which is condensed with the pyrrole ring to form an aromatic cyclic structure]. The optical material comprises a sheet substrate coated with a photosensitive layer containing the composition and a binder. The composition reacts quickly by irradiation with visible semiconductor laser beams to form images. Thus, a photosensitive resin composition comprised Maruka Lyncur M-S 3 [poly(p-vinylphenol); Mw 8300], n-butylo ether, Cymel 300, I, and NK-3380 (III).

IT 174459-19-9
(visible light-reactive resin composition and recording material using it)

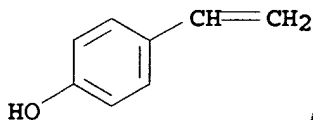
RN 174459-19-9 HCAPLUS

CN Phenol, 4-ethenyl-, polymer with 1,4-bis(ethenyloxy)cyclohexane (9CI) (CA INDEX NAME)

CM 1

CRN 2628-17-3

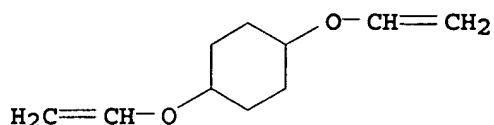
CMF C8 H8 O



CM 2

CRN 706-13-8

CMF C10 H16 O2



IC ICM G03F007-031
 ICS G03F007-027; G03F007-038
 ICA G03F007-004
 CC 74-4 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)
 IT 91277-21-3 174459-19-9 174459-20-2
 (visible light-reactive resin composition and recording material using it)

L66 ANSWER 29 OF 29 HCAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 1995:315625 HCAPLUS
 DOCUMENT NUMBER: 122:326513
 TITLE: Positive-working light-sensitive composition.
 INVENTOR(S): Kondo, Syunichi; Umehara, Akira; Aotani, Yoshimasa; Yamaoka, Tsuguo
 PATENT ASSIGNEE(S): Fuji Photo Film Co., Ltd., Japan
 SOURCE: Eur. Pat. Appl., 65 pp.
 CODEN: EPXXDW
 DOCUMENT TYPE: Patent
 LANGUAGE: English
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 609684	A1	19940810	EP 1994-100530	1994 0114
EP 609684 R: DE, GB	B1	20000405		
JP. 06230574	A2	19940819	JP 1993-18793	1993 0205
US 5939235	A	19990817	US 1997-968210	1997 1112
PRIORITY APPLN. INFO.:			JP 1993-18793	A 1993 0205
			US 1994-176257	A1 1994 0103
			US 1995-545370	A1 1995 1019

OTHER SOURCE(S): MARPAT 122:326513

AB A pos.-working light-sensitive composition comprising (a) a compound having ≥ 2 enol ether groups, represented by the following general formula (R2) (R1)C:C(R3)-O- wherein R1, R2 and R3 may be

the same or different and each represents a H atom, an alkyl group or an aryl group, provided that each 2 of R1, R2 and R3 may be linked together to form a saturated or olefinically unsatd. ring. (b) a linear polymer having acidic groups; and (c) a compound capable of generating an acid through irradiation with actinic light rays or radiant rays, the component (a) and the component (b) being thermally crosslinked. The pos.-working light-sensitive composition has high light-sensitivity and permits the use of light rays extending over a wide range of wavelengths. Therefore, the pos.-working light-sensitive composition can provide clear pos. images and has a wide development latitude.

IT 160508-71-4

(crosslinked; pos.-working photoimaging composition)

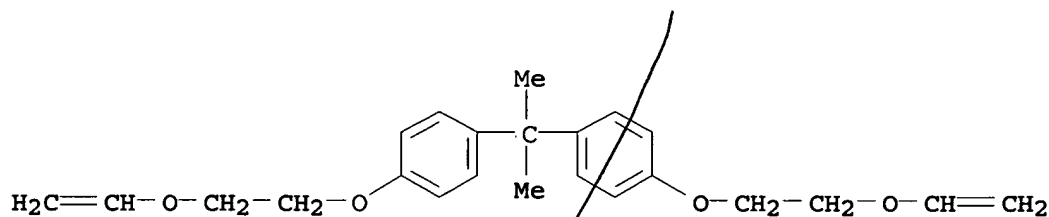
RN 160508-71-4 HCAPLUS

CN Phenol, 4-ethenyl-, polymer with ethenylmethylbenzene and 1,1'-(1-methylethylidene)bis[4-[2-(ethenyloxy)ethoxy]benzene] (9CI) (CA INDEX NAME)

CM 1

CRN 52411-04-8

CMF C23 H28 O4



CM 2

CRN 25013-15-4

CMF C9 H10

CCI IDS



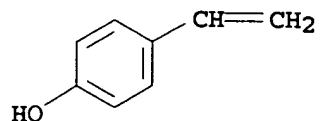
D1-Me

D1-CH=CH2

CM 3

CRN 2628-17-3

CMF C8 H8 O



IC ICM G03F007-039
ICS G03F007-004
CC 74-4 (Radiation Chemistry, Photochemistry, and Photographic and
Other Reprographic Processes)
IT 160508-63-4 160508-64-5 160508-65-6 160508-66-7
160508-67-8 160508-68-9 160508-69-0 160508-71-4
160508-72-5 160508-73-6 160508-74-7 160508-75-8
160508-76-9 160508-77-0 160508-78-1 160508-79-2
160508-80-5 160508-81-6 160508-82-7 160508-83-8
160508-84-9
(crosslinked; pos.-working photoimaging composition)